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Original Articles

SYMPTOMATOLOGY AND LOCALIZATION OF BRAIN TUMOR *

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PHILADELPHIA

The most important indication of brain tumor is a gradual development of signs pointing to a sharply limited lesion of the brain; this may occur when the general symptoms of tumor, headache, nausea, vomiting and papilledema, are absent. It may, of course, be produced by other lesions, but in none is it so common as in tumor.

It is desirable to call attention in this connection to a symptom-complex that I have treated more at length in a paper read at the last meeting of the American Medical Association, namely, gradually developing hemiplegia. The importance of this complex is frequently overlooked. Since the presentation of the paper referred to I have had the opportunity of observing in consultation another case in which the only important signs of brain tumor had been a hemiplegia of uncertain beginning with hemianesthesia, in which, without any sudden increase of symptoms, the weakness had imperceptibly from day to day increased to a complete unilateral paralysis. Hemianopsia probably existed on the side of the hemiplegia. The diagnosis of hemorrhage or thrombosis had been entertained, and, as the patient lived in the country, an ophthalmoscopic examination had not been made. The very positive statement as to the slowness in the development of the hemiplegia led me to suspect brain tumor and, as the patient was a woman, to examine the breasts. A hard nodule with a retracted nipple was found, and further investigation elicited the information that the patient had had headache for some time, and other members of her family had had carcinoma. A necropsy was refused, and yet I do not feel venturesome in making a diagnosis of metastatic carcinoma of the brain. In this case is shown the importance of focal symptoms without the general symptoms of tumor. It is not a bad idea to examine the breasts of a female patient who has symptoms of cerebral or spinal tumor.

We hear from the surgeons chiefly, but it is a truth that others also should emphasize, that operation in cases of brain tumor must not be delayed long—that to be successful it must be done early. There are two sides to this question, as to many others, and the neurologist more than the surgeon sees the early clinical aspect. A patient does not usually consult a surgeon for some cerebral lesion until he has been at least partially convinced that operation may be advisable. He may not have acknowledged this to himself, but his attitude toward operation is a receptive one. The neurologist more frequently sees the first indications of what may be brain tumor, and yet with his experience he often is unable to make a positive or even a probable diagnosis of tumor in an early stage of the disease. He must not be hasty or he will have many a head opened when there is no need.

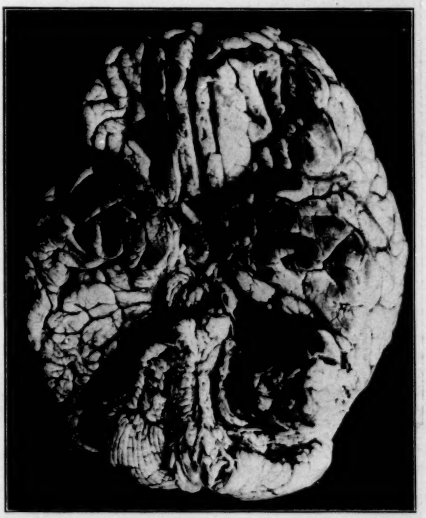

Fig. 1.—Tumor which developed just below the tentorium and caused vertigo, ataxic gait, disturbance of speech, deafness, nystagmus, paralysis of the left external rectus muscle, some facial palsy, etc.

His responsibility is great. A necessity for moderate delay for observation and antisyphilitic treatment is not to be ignored, but the delay must not be too long or antisyphilitic treatment pushed too far. It must also be borne in mind that in glioma the symptoms may be decidedly lessened by the administration of an iodid, as in a recent case under my observation. The Wassermann reaction has become an important aid to diagnosis, but we must not forget that a syphilitic person may have a non-syphilitic tumor.

* Read by invitation before the Chicago Medical Society, Oct. 27, 1909.

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Especially serious is the delaying of decompression when papilledema is developing rapidly, as it may in tumor of the pons or cerebellum. I have known it to reach a high degree within a few days. As tumors of the pons often exist for a long time without causing papilledema, and then suddenly may give rise to a rapid swelling of the optic discs, the danger of being caught off one's guard is by no means imaginary.

As an illustration of the difficulties in deciding from the early symptoms as to the existence of a tumor a recent case under my observation may be briefly referred to.

A man of much intelligence with a syphilitic history had a convulsive attack confined to the left side of his body about a year ago. This was the only attack he had had. Headache and vertigo had occurred, but had not been important. No changes in the eyegrounds were found. A short time ago left hemiplegia developed gradually within a period of four days, and then gradually diminished and disappeared in a few weeks. These were the only symptoms, and yet they were suggestive of a focal lesion in the right motor region. Operation did not seem to me advisable at this early period, as the case was probably one of vascular disease. I was, however, prepared for the possibility of an operation later.

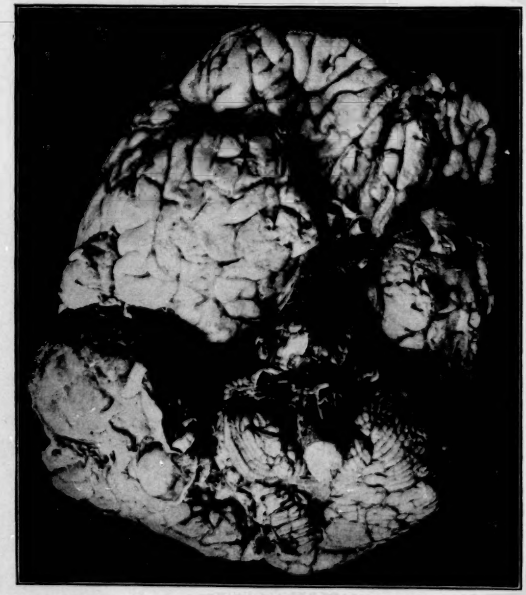

Fig. 2.—Tumor much larger than that shown in Figure 1, but growing above the tentorium. The only important signs were large head, nystagmus, papilledema, and diminished patellar reflexes.

I am not in sympathy with the teaching that when there is any doubt as regards the existence of a brain tumor decompression should be performed and later the antisyphilitic treatment should be carried out. In my opinion, decompression is indicated in cases in which grave symptoms of increased intracranial pressure exist, and if the symptoms do not call for immediate decompression. I much prefer the antisyphilitic treatment before the skull is opened. Of course, the delay must not be too great, but the wise physician must learn by experience how long he dare wait. Decompression is a trauma of the head, and when mental failure has begun it may be intensified by this operation, as has occurred in my own practice, and in some instances decompression does not benefit the patient.

The interpretation of symptoms of brain tumor is not always easy. General symptoms may be mistaken for focal symptoms, and this is especially liable to occur if the supposedly focal symptoms appear late. The early appearance of focal symptoms has much greater diagnostic value than the appearance of the same symptoms after intracranial pressure has been increased for some time. No one makes a focal diagnosis from papilledema; at most he employs it only as indicating the side of the brain affected, but nerve deafness occurring with other signs of tumor has been regarded by almost all as of focalizing value. If it develop late in the symptom-complex there is a possibility that it may be merely a sign of intracranial pressure, and comparable with papilledema. Some evidence is at hand to indicate that possibly early appearing nerve deafness may be from general intracranial pressure, as in a case reported recently by Ruckert, in which tinnitus aurium and nerve deafness were among the first signs of tumor of the frontal lobes. Internal hydrocephalus may be used to explain certain cases of this character, or pressure driving the posterior part of the brain into the foramen magnum, but such lesions are not early even if the symptoms so produced appear to be early, and neither condition mentioned was present in Ruckert's case. A similar case has been reported by Souques, and explained as the result of general intracranial pressure. It is well perhaps to be a little cautious in regarding nerve deafness as one of the general symptoms of intracranial pressure; it is far more frequently a focal symptom, and not entirely parallel with papilledema.

Other cranial nerves may be affected by general intracranial pressure, but the signs of such involvement are usually late in appearing in the symptom-complex. I have known loss of smell to occur from a tumor at the foramen magnum, and paralysis of an external rectus muscle from a tumor of the parietal lobe. The abducens nerve has the longest intracranial course of any of the cranial nerves, arising, as it does, at the union of the pons and medulla oblongata and leaving the skull through the sphenoidal fissure; and one should be cautious in accepting its paralysis as a localizing sign, unless when it occurs early.

Every experienced neurologist has met apparent contradictions between focal lesions and symptoms. Certain areas of the brain have been generally recognized as having to do with certain functions, and yet these areas have been destroyed without a corresponding loss of function. Various explanations have been sought. The statement has been made that a portion of the area must have been left intact, or the corresponding area in the opposite hemisphere must have assumed a vicarious function. These explanations have not satisfied all investigators; von Monakow has put forward his diaschisis theory,

and insists that we must not identify localization of function with localization of symptoms. Localization of focal symptoms is a complicated reaction of the uninjured nervous system to the local cortical insult; whereas the localization of function depends on the action of all the elements of the function concerned in the entire central nervous system. When an area of the brain is destroyed, many tracts in connection with this area, commissural, associative, projectile, are injured or destroyed, and the effect is demonstrated by the disturbed action of distant parts of the central nervous system. The loss of tendon reflexes of the lower limbs in hemiplegia, for example, is the effect of diaschisis, as shown by disturbed function in the lumbar portion of the cord from a lesion of the cerebrum. As the various tracts differ to some extent in different individuals, the symptoms of a lesion, i. e., the reaction of the nervous tissue not directly affected in the lesion, varies from case to case, both in intensity and duration. We probably have in diaschisis one of the most satisfactory explanations for the apparent contradictions between symptoms and lesions that we frequently observe, and by it possibly we may explain astereognosis and other sensory disturbances following operations confined to the area of the brain anterior to the central fissure. In such operations, however, we must not discount the effect of exposure of a considerable area of the brain, of the results of handling the brain during operation, and especially the interference with the circulation of adjoining regions caused by the removal of a tumor or merely the ligation of vessels. The importance of the last procedure in causing symptoms has been demonstrated by the ligation of cortical vessels in the treatment of epilepsy.

In this connection I would refer to the recent valuable Linacre lecture by Sir Victor Horsley on the function of the so-called motor area of the brain. He describes a case in which, because of the athetoid movements of the left hand and later violent convulsive movements of the whole left upper limb, he removed the entire motor region for the upper limb in the gyrus precentralis, as determined by the response to electric stimulation. The whole depth of this gyrus was excised without any injury to the neighboring gyri or even to the vessels of the sulci, beyond the laceration of the smallest branches entering the portion of gyrus removed. Although not germane to the question under discussion here, it may be mentioned that the spasmodic movements totally disappeared from the moment that the gyrus was removed, and have remained absent to the time of publication of the paper (thirteen months), and a month after the operation voluntary movements began to return and are increasing in efficiency.

The result of this operation led Horsley[1] to conclude that in man the gyrus precentralis is the seat of representation of tactility, topognosis, muscular sense, arthric sense, stereognosis, pain and movements.

We may, perhaps, ask whether this case proves all that is claimed for it. Granting that the motor area of the gyrus precentralis was accurately defined, and that it is possible to do so by electricity, concerning which I have some doubt, as electrical response may not be identical with voluntary motion; still we must all admit that after the excision of so large a piece of cortex, measuring approximately 4.5 cm. in length—if I read the somewhat indistinct photograph of the scale correctly—the disturbance to connecting tracts must be considerable, and the results of diaschisis so produced might well persist thirteen months. Therefore it seems questionable whether one may make so decisive arguments from this case for the sensory area of the gyrus precentralis. I have never been able to convince myself, however, that the gyrus precentralis is entirely motor and the gyrus postcentralis entirely sensory. From *a priori* reasoning this conclusion seems improbable. The regions of the brain are not separated so sharply from one another as to form a map with outlines as definite as those of the United States, and we all admit that the motor cortical centers are not sharply defined from one another. It seems decidedly schematic to say that the central fissure is a line of sharp definition—indeed, the bottom of the fissure is supposed to be the line of definition—that in front of it is the entire motor area, and behind it the entire sensory area. The same objections to these conclusions in this extremely valuable paper of Horsley's may be made to some of those in Hoppe's recent important paper[2] on the location of stereognosis in the gyrus precentralis.

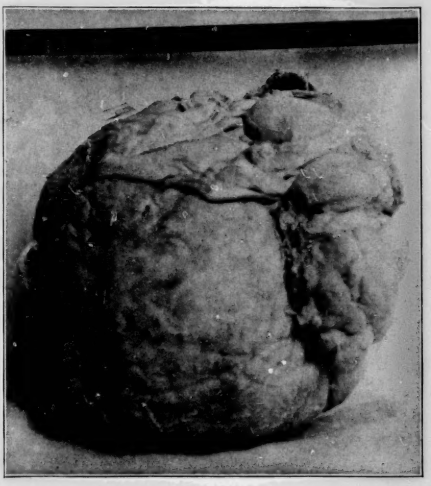

Fig. 3.—A larger view of the same tumor shown in Figure 2.

Possibly more valuable in determining the representation of sensation in the precentral region is the experience of Cushing,[3] who in a person not under the effect of an anesthetic obtained the sense of muscular movement from the gyrus precentralis by electrical irritation. He states that his patient was perfectly aware of the movements, and described his appreciation of them as a drawing sensation, as when the muscles are "pulled" by peripheral electrical stimulation. Was this, however, the stimulation from the muscular movement conveyed from the limb through sensory fibers to the parietal lobe?

Horsley's case seems to show what he claims for it regarding motion, namely, that motion is not represented solely in the gyrus precentralis, and to justify his conclusion that the gyrus postcentralis is in man part of the area for the upper limb in which the sensorimotor representation is of the same kind as that in the gyrus

1. Horsley: Brit. Med. Jour., July 17, 1909, p. 125.

2. Hoppe: Jour. Nerv. and Ment. Dis., September, 1909.
3. Cushing: Brain, 1909, xxxii, 48.

precentralis, but in it probably provision for sensorial coordination is greater, and that for efferent impulses less. It is to be remembered that he destroyed the whole motor area for the upper limb in the gyrus precentralis and yet much voluntary motion returned. Horsley states that such conclusions were made probable by the experiments of Grünbaum and Sherrington on the chimpanzee, in which animal these observers found that after the arm area in the so-called motor precentral gyrus was excised the purposive movements returned in a few weeks, and compensation was not effected by the opposite arm area in the contralateral hemisphere.

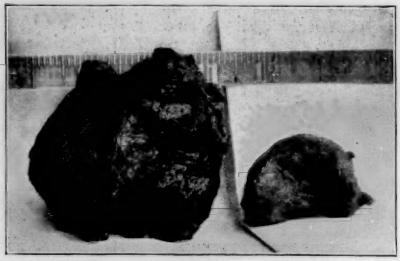

Fig. 4.—The larger of the two tumors here shown grew from the petrous portion of the right temporal bone and caused as first signs, twitching of the right side of the face and pain in the region of the ear. The smaller tumor was removed from the front part of the cerebrum, and was a glioma. Sudden death occurred five or six hours after the removal of the tumor.

Horsley shows by his case that the Betz cells are not necessary for motor function, and refers to the fact that Brodmann likewise demonstrated that they are not indispensable for purposive muscular actions; therefore conclusions based on the histology of the cortex in defining the motor region contain an element of uncertainty. The same is true of Campbell's conclusions as to the sensory area posterior to the Rolandic fissure as determined by the alteration in a sensory nervous disease as tabes, conclusions which have been shown to be erroneous by Gordon Holmes.[4]

In November, 1899, I reported[5] that I had employed the degeneration of amyotrophic lateral sclerosis extending to the cortex as a means of determining the extent of the motor cortex in man. No one previously had used this method, and yet the degeneration of this disease is chiefly one of the motor system. The gyrus postcentralis was not intact in my case, but was considerably less degenerated than the gyrus precentralis. It is true that tracts other than motor are sometimes slightly degenerated in amyotrophic lateral sclerosis, but this degeneration probably is not early and may be secondary. I am not aware that anyone has observed pronounced degeneration detectable by the Marchi stain in the posterior columns in this disease.

Later Campbell employed this means without reference to my work, but was unable to find degeneration in the gyrus postcentralis. Rossi and Roussy[6] still later found degeneration in the gyrus postcentralis by this method.

It is singular that a case very similar to Horsley's should be reported by P. L. Friedrich[7] about the same time that Horsley's paper appeared. The upper limb center in the gyrus precentralis was defined by electrical irritation and excised because of epilepsy. The return of motor power after five and a half weeks was very marked. Contrary to the findings in Horsley's case, sensation was not altered in any way. The operation produced a cure, at least until the time of the report, six months after the operation. Friedrich explains the return of power as the result of "compensation," and implies that it was from the opposite cerebral hemisphere, although this statement is not clearly made. Before this question of the method by which return of power occurs can be satisfactorily answered it will be necessary to have the results of excision of the centers for corresponding limbs in both cerebral hemispheres in man, and it is not likely that these will be obtained soon.

Few American or English surgeons or neurologists, so far as I know, have advocated cerebral puncture. As yet this procedure seems to be recommended chiefly by certain German physicians. It has the approval of Oppenheim, but is discountenanced by Krause, and has led to open letters between these two men. There are grave dangers in connection with it that have deterred many from adopting it, and it seems doubtful whether it will ever come into general use.

It is likewise doubtful whether the search for tumor cells in the cerebrospinal fluid by lumbar puncture will be of much service. It is true that Sicard and Gy[8] obtained sarcoma cells in this way in sarcomatous meningitis, but a solitary tumor would be unlikely to produce sarcoma cells in the cerebrospinal fluid, and sarcomatous meningitis is extremely rare. Lumbar puncture also is serious in cases of suspected tumor of the brain and has repeatedly caused a fatal termination.

When multiple fibromas occur in superficial parts of the body associated with signs of tumor of the cerebellopontile angle, they are regarded as indicating that the cerebral tumor is likewise a fibroma. In none of the cases of tumor of the cerebello-pontile angle that I have seen were fibromas of superficial parts found, and this

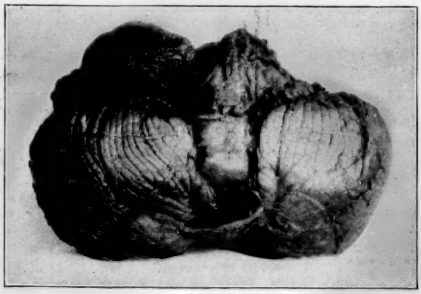

Fig. 5.—Thrombosis of the inferior petrosal and cavernous sinuses, causing symptoms like those of tumor, lasting about a year.

association of superficial and deep growths seems to be so rare as to be of comparatively little value in diagnosing a brain tumor, although occasionally it is of much importance, as in a case described to me recently by Dr. G. Bastianelli, of Rome, Italy.

4. Holmes, Gordon: Rev. Neurol. and Psychiat., 1908, p. 5.
5. Spiller: Jour. Nerv. and Ment. Dis., 1900, p. 165; Contrib. from William Pepper Lab. Clin. Med., 1900.
6. Rossi and Roussy: Rev. Neurol., Aug. 15, 1907.
7. Friedrich, P. L.: Monatsschr. f. Psychiat. u. Neurol., 1909, xxvi, 129.
8. Sicard and Gy: Rev. Neurol., Dec. 15, 1908, p. 1245.

The *x*-rays also have been unsatisfactory in my experience. I have never been convinced that the shadows shown and supposed to indicate brain tumors were reliable. When the bone of the skull is much thinned, as from increased intracranial pressure or when the sella turcica is enlarged, *x*-rays may be of service.

I have examined the specimens of brain tumor in my possession in the Laboratory of Neuropathology of the University of Pennsylvania, and have counted 72; probably some have been overlooked. By far the larger number of these (40) were in the cerebrum. The tumors in the pons (7), in the cerebello-pontile angle (8) and in the cerebellum (7) were nearly the same in number. Most of the tumors are gliomas or sarcomas, and the numbers of these two varieties differ according to the interpretation of the examiner. The diagnosis between glioma and sarcoma may be difficult, and the term gliosarcoma is an attempt to avoid the distinction.

The diagnosis of gliosarcoma usually implies a tumor that has resemblance to both glioma and sarcoma, and not usually a tumor partly a glioma and partly a sarcoma. Such a mixed tumor must be rare and difficult to recognize, but that it may occur is shown by the report of a recent case by Merzbacher.[9] In this a tumor of the brain contained as a center a sarcoma with a periphery of glioma. The sarcoma was considered the primary tumor, and Merzbacher speaks of glioma following sarcoma or reactive glioma in preference to gliosarcoma.

Only two gliomas in my collection were fairly sharply defined, and one of these was infiltrating at one portion. I have had no sharply defined glioma with one exception, and I am a little in doubt in regard to this. Well-defined gliomas are reported by others. I have never had any finding that would lead me to believe that a glioma may entirely disappear and give place to a cyst.

Dr. F. B. Mallory regards sarcoma as a rare tumor of the brain, and some tumors sharply defined that would be classed by many as sarcomas he places among the gliomas. The fibromas or fibrosarcomas within the cranium he classes as endotheliomas.

I would call attention especially to the small number of macroscopic gummas (4) in my collection. We often hear the diagnosis of gumma made when cerebral syphilis is suspected, and yet the findings do not justify this diagnosis. I have for years taught students to be careful in making the clinical diagnosis of gumma of the brain. Cerebral syphilis is extremely common, but the usual lesions are arteritis and meningitis, and it is because of this that antisyphilitic treatment may be so valuable in the early stages of syphilis of the nervous system before degeneration has occurred. I do not believe that it is possible to dissolve by drugs a well-organized growth.

The tumors growing in the pons (7) in my specimens were: glioma 4, tubercle 3. Tumors of the cerebello-pontile angle are almost always fibromas or fibrosarcomas, although by some these growths are described as endotheliomas. They differ from the tumors I have regarded as endotheliomas, which develop from the dura. The cerebello-pontile angle tumors are well defined and easily removable, so far as their attachments are concerned, but they are situated in such a dangerous region that the attempt to remove them is almost always fatal, or, if not fatal, the condition of the patient usually is not improved by the operation, or is even rendered more pitiable. It seems, indeed, strange that the most favorable form of tumor (fibroma) as regards structure and sharp definition should favor above all portions of the brain the cerebello-pontile angle, the most vital region.

Carcinoma rarely occurs; in my collection it is present in 3 cases; nor is tubercle very common. I have seldom found multiple tumors, and this infrequency is important as regards operation. Most tumors growing from the dura are fibromas, fibrosarcomas, or endotheliomas; occasionally gumma is found, and these are all favorable for operation. The gumma is more likely to be a superficial tumor, but is never sharply defined; when growing in the brain substance it is not very favorable for operation, but may be so when confined to the dura.

Sarcomatosis, or tumor meningitis resembling sarcoma or glioma tissue, I have seen four times. It seems to be little known in this country, and the clinical diagnosis because of the diffuseness of the symptoms, is extremely difficult. Where a sarcoma develops elsewhere in the body and is recognized, sarcomatosis of the nervous system also may be diagnosed, or it may be suspected where symptoms of brain tumor are associated with those indicating focal symptoms of the spinal cord.

Occasionally a condition of general clonic spasms occurs in tumor of the brain, resembling that of a patient in a state of acute alcoholism. It is not unlike the epilepsia partialis continua, to which I called attention in this country in June of this year,[10] although it has been known to Russian writers many years. I have recently had an opportunity to observe this general clonic spasm in a man who had a large tumor extending almost to the cortex and occupying the motor area of the brain. If such a case were brought before the physician without any knowledge of the previous history a diagnosis of alcoholism might be excusable.

The symptoms of tumor are seldom mistaken for the nephritis of pregnancy, but this is a possibility that must be considered. In one of my cases (No. 296) the early symptoms of tumor (an endothelioma) occurring during the late stage of pregnancy and persisting after delivery might have led to a diagnosis of nephritis of pregnancy. Papilledema, convulsions, nausea, vomiting, and headache might easily be explained by such a diagnosis. Unfortunately the report of the urinary examination has been lost, but an examination was certainly made. The loss of tendon reflexes of the lower limbs, paresis of the left facial nerve and of the left external rectus muscle which occurred in this case would suggest a focal lesion, but these symptoms were few and slight considering the large size and position of the tumor. The escape of the fifth nerve is noteworthy with a tumor situated as this was, near the cerebello-pontile angle, but above the tentorium. Cases of tumor without any focal symptoms are by no means rare, and one may readily understand the difficulty that might arise in diagnosing between nephritis of pregnancy and tumor.

As compared with the case just mentioned, another case of tumor (a fibroma, No. 338) was typical, and yet the two tumors were in nearly similar situations. In the latter the symptoms were vertigo, ataxic gait, occipital headache, thick and slow speech, failure of hearing on the left side, and failure of sight with optic neuritis, slow nystagmoid movements in attempts at rotation, paralysis of the left external rectus muscle, cessation of menstruation for almost six months, slight weakness of the left side of the face and of the left muscles of mastication, exaggeration of patellar reflexes, especially of the right with patellar clonus, and uncertain Babinski reflex on the right side. The diagnosis of a tumor of the left

9. Merzbacher: Monatsschr. f. Psychiat. u. Neurol., August, 1909, p. 176.

10. Spiller: THE JOURNAL A. M. A., June 12, 1909, lii, 1921.

cerebello-pontile angle was as certain as such a clinical diagnosis ever can be.

Still more illustrative of the difference in the symptomatology of a tumor immediately above the tentorium and, therefore, in the middle cranial fossa, and of one immediately below is the following case (a fibrosarcoma, case No. 337), in which the tumor was exceedingly large and measured 8 cm. in diameter, and was round as a ball, and yet the symptoms were indistinct. The man was a patient of Dr. Mills' and was for a time under my care. His father was said to have a very large head, of about the same size as the patient's. The man was admitted to the hospital Feb. 20, 1906. About five months previously he had what was diagnosed as acute Bright's disease. Then he complained of his eyes becoming weak so that he could not see so well as formerly, but he states that for some years he was obliged to squint in order to get a good view of an object. He had no pain, no nausea, no vomiting (except vomiting during a short period), and no vertigo. His only serious symptom was impairment of vision. The report from Dr. de Schweinitz concerning the eyes was:

> Vision, O.D. 6/100; O.S. 6/100. Horizontal nystagmus, ocular movements free. Convergence practically nil, O.S. deviating. O.S. shows blurring and striation of nasal side of disc with some dipping of vessels, beginning neuritis +3D., large crescent out but edges seen. The swelling in O.D. is very vascular. O.D. shows a decided choked disc, height 10-11 D.

His head was so large as to suggest hydrocephalus. In looking directly forward he had lateral nystagmus and also occasionally in looking to either side; it seemed to be more an ataxic movement of the eyeballs. Finger-to-nose test showed slight ataxia on each side. Circumference of the head measured 25 inches, and from one external auditory meatus to the other 14 inches. The patient wore a 7¾ hat. The patellar reflex was almost lost on each side. He did not have Romberg's sign. Gait with the eyes closed was a little ataxic, but he did not really stagger.

As the symptoms might be interpreted as those of tumor, although hydrocephalus was possible, he was referred to Dr. Frazier's service. Operation was performed February 21 over the occipital bone and a portion of the lateral lobe of the cerebellum was removed, but the patient's condition was so serious that the operation had to be hastily concluded. He died March 9.

The necropsy was performed by Dr. Lavenson. The brain without the tumor weighed 1,920 gm., with it 2,110 gm. The convolutions were considerably flattened. The tumor weighed 190 gm. and was found on the right side of the brain adherent to and apparently taking its origin from the tentorium cerebelli. It was entirely encapsulated and nowhere firmly adherent to the brain tissue. It had destroyed the anterior basal portion of the right occipital lobe and the greater portion of the basal part of the right temporal lobe. The tumor was firm, dense, and smooth. Two or three smaller nodules adherent to it were found at its attachment to the dura. A growth situated as this was at the base of the occipital lobe may not interfere with the optic radiations, which are situated higher, and therefore may not cause hemianopsia.

Vomiting was slight, and there was no headache and no vertigo. The only important signs were the large head, nystagmus, changes in the eyegrounds, and diminished patellar reflexes; truly very insufficient disturbance when the large tumor is taken into consideration. The case shows the extraordinary degree of pressure the brain will occasionally endure, and yet in most cases such a growth would cause grave symptoms.

The early appearance of symptoms in basal tumor probably depends on the early involvement of one or more cranial nerves in the growth. If these nerves are merely distorted by the developing tumor, especially if the distortion be of slow development, the symptoms are much less intense.

Another case (an endothelioma, No. 494) I may refer to in which the tumor developed in the posterior fossa and, although small, gave very definite symptoms. At first it was not easy to exclude entirely a lesion in the petrous portion of the temporal bone, or a multiple neuritis of cranial nerves. The insidious onset that a tumor may have was well shown in this case. The twitching of the right side of the face with pain in the region of the ear was the earliest and for some weeks the only sign of tumor. The subjective disturbance of hearing preceded many weeks any objective deafness, and this is one more evidence that subjective disturbances are likely to precede objective. A patient's statement of his symptoms, provided he be intelligent, may be of great value to us in diagnosis when our examination reveals nothing. In the recent case reported by Horsley and referred to above, the statement is made that several days before the movement of the fingers and thumb returned the patient stated that he felt that the power was returning, and that he would shortly move the members.

In my case considerable complaint was made of numbness in the right side of the face, although no impairment of sensation could be detected by examination. I have seen a subjective sense of weakness in a limb precede by twenty-four hours any objective paresis.

The diagnosis of a lesion, probably tumor, near the exit of the seventh and eighth nerves was not difficult when the pain and twitching of the right side of the face were followed by complete right facial palsy, right nerve deafness, paresis of the right side of the soft palate, some ataxia in walking, and exaggerated left patellar reflex with left ankle clonus; but for a long time it was very difficult to decide whether the lesion was in the inner ear or within the cranium, and at first the possibility of multiple neuritis of the cranial nerves had to be considered, and also that of glioma of the pons and medulla oblongata, as glioma does not produce symptoms from all the structures it implicates. The diagnosis of location was fully confirmed by the two operations that became necessary.

Both Dr. Frazier and I were very loath to have a second operation in this case, as the patient nearly died after the first, but he and his relatives insisted on having it performed, and it did not seem right to refuse him the one chance for his life. The tumor at the second operation was removed by Dr. Frazier.

It is worthy of note that no evidence of papilledema was present in this case, although the growth was in the posterior cranial fossa and of fairly large size. When removed it measured 4 cm. in length. The pain began in the region of the right ear, and was one of the earliest symptoms, and sometimes the ear and adjoining part of the face were tender to touch. The pain was not in the forehead unless it radiated there from the ear. The possibility of this pain being caused by irritation of the seventh nerve must be considered. It was not in the distribution of the fifth nerve, and there were neither objective sensory nor motor signs of implication of this nerve. It followed twitching of the right side of the face and, therefore, like the twitching, seemed to be caused by irritation of the facial nerve.

The twitching of the facial muscles from irritation of the facial nerve, occurring in attacks and resembling cortical irritation, is a phenomenon not very well known. It was present in this case, and I have known it to occur in at least two cases in which I was associated with Dr. Mills, who has put these cases on record.[11] The first case occurred about 1900 and was reported by Dr. Mills and me at that time before one of the Philadelphia medical societies. The spasms were witnessed by both of us, and was so suggestive of cortical irritation that it was difficult at that time, without any similar occurrence reported in the literature, to attribute it to irritation of the facial nerve. It differed from the more common forms of facial spasm in that it occurred at rather long intervals and was more like an epileptic attack. Further reference has been made to these cases by Dr. Weisenburg.

It was desirable in the case to which allusion has been made above to determine whether the tumor implicated the seventh and eighth nerves at their exit from the cranium or at their exit from the pons where it joins the medulla oblongata. The symptoms did not permit a differential diagnosis as regards these two locations, and I doubt whether such a diagnosis would be possible.

Sudden fatal termination is common in tumors situated anywhere in the brain, but especially when the tumor is in the posterior cranial fossa. Operation was attempted by Dr. Frazier in one of the cases referred to in this paper (No. 296), in which after an opening about the size of a silver dollar had been made in the occipital region the patient suddenly became pulseless and respiration ceased. Her condition improved, but she died the same day.

The explanation may be that the tumor in this situation causes dislocation of the posterior part of the brain into the foramen magnum, but a more probable explanation seems to me to be that the cardiac and respiratory centers of the medulla oblongata are damaged by the pressure of the tumor and are less likely to withstand an operation.

In another case (Rosenfeld) in which the diagnosis was cerebellar tumor, decompression over the cerebellum was performed. The patient, a child 8 years old, rallied from the operation and slept well during the following night. The next morning with the temperature 98 degrees, pulse 84, and respiration 20, she suddenly began to gasp for breath and then ceased breathing, and soon the heart ceased to beat. This sudden death was observed also in a cerebellar case without operation (Lokuta), and in a case of cerebellar tumor (McClain), after decompression over the posterior cranial fossa. The patient, a boy aged 13, did well after the operation by Dr. Frazier for ten days, and had been in a wheel chair frequently. On the tenth day about midday he suddenly became very cyanotic, respirations became rapidly reduced until they practically ceased, and he sank into profound stupor. After prompt and prolonged artificial respiration, administration of oxygen and stimulation, the cyanosis disappeared and the patient recovered from the attack. Near midnight of the same day he had another attack of respiratory failure with cyanosis similar to the previous one and gradually sank and died within two hours.

Sudden death is not confined to cerebellar lesions, as shown by still another case (No. 495) in which death occurred very suddenly five or six hours after the removal of a small tumor, a glioma, by Dr. Frazier from the front part of the cerebrum, when the patient had seemed to be in excellent condition for some hours after the operation until twenty minutes before death (Fig. 4). It would be easy to add other illustrative cases.

The causes of sudden death are numerous and not always detectable even at necropsy. Candler has shown[12] that hemorrhage into the suprarenal capsule may give rise to obscure abdominal symptoms or nervous manifestations difficult of diagnosis, and may even be a cause of death without any appreciable symptoms whatever, and there are many other ways in which death, even sudden death, may occur without the cause being clearly demonstrated. To one aspect of a case in which sudden death occurred (Lokuta) I would call especial attention. A Pole with symptoms of tumor of the posterior cranial fossa was evidently very much frightened when brought into the operation room, and went into collapse just before etherization was begun. The attack which preceded etherization seemed to be brought on by fear of the operation. It is the only instance in which I have known fear to have such serious results in brain tumor, and the occurrence seems to indicate that severe depressive emotion may impair the chances in a serious cerebral or possibly cerebellar operation, much as Crile has demonstrated it may in operations on the thyroid gland.

In this case, as in others I have tested, the conjunctival and corneal reflexes were normal. Oppenheim regards a diminution of these reflexes as indicative of cerebellar tumor, and when unilateral as being on the same side as the tumor. I have never found a loss of these reflexes in cerebellar tumor. I would suggest that where the test is made with a piece of cotton wool the examiner may be deceived, as many normal persons may stand this sort of touch of the eyeball without winking.

In one case (No. 338) the left motor fifth was affected, but the sensory portion of this nerve escaped. In another case (No. 477) the sensory portion of the fifth nerve was affected by pressure of a thrombotic inferior petrosal sinus and the motor portion escaped. We have in this one of the peculiar selective actions of lesions in producing symptoms so common in nervous diseases.

Ataxia in walking and standing may be increased by closing the eyes, notwithstanding the lesion is cerebellar. It is often stated that a diagnostic point between the ataxia of tabes and that of cerebellar disease is the absence of increase in the ataxia on closing the eyes in the latter disease. This is not an absolutely reliable sign, as in some cases of cerebellar ataxia closing the eyes increases the incoordination.

Repeated attacks of hemiplegia are a rare manifestation of tumor. In one of the cases (No. 495) left hemiplegia with stupor and convulsions followed by almost complete recovery, and later by a return of the palsy with stupor and convulsions, seemed to be a form of exhaustion paralysis. That paralysis may follow convulsions and last several days, and even much longer if the convulsions be repeated, is well known. There could not have been any sudden increase in the size of the tumor to cause two attacks of paralysis, nor could the condition be regarded as uremic. The exhaustion paralysis of epilepsy was strikingly shown in a case reported recently by Williams Cadwalader,[13] and the literature is given by him.

11. Mills: Boston Med. and Surg. Jour., April 26, 1906.

12. Candler: Arch. Neurol and Psychiat., 1909, iv.

13. Cadwalader, Williams B.: THE JOURNAL A. M. A., Nov. 21, 1908, li, 1778.

It is well to remember that a cyst of the cerebrum or cerebellum is usually in association with tumor, and it is proper, therefore, to search for tumor when a cyst is found at operation. In one case (No. 326) the diagnosis of cerebellar tumor was easy. The improvement after the finding and evacuation of a cyst was striking, but it became my painful duty when informed of the results by letter to suggest that caution was needed. I much feared that the evacuation of the cyst would produce only temporary relief by diminishing the pressure on the brain. Such proved to be the case, and a glioma of the cerebellum was found later. A cyst is very often associated with a glioma.

The important question as to whether Jacksonian epilepsy is a sufficient cause alone for operation on the brain is of importance. The Jacksonian spasm in a case (Davenport) observed by me was for about a year and a half the only sign of cerebral lesion, and it was not until after this period that slight motor aphasia and slight hemiparesis developed. Headache and papilledema were not symptoms. I felt that an exploration of the brain was desirable, because convulsions strictly unilateral occurring occasionally during eighteen months were very suggestive of focal lesion, and such a focal lesion most likely would be tumor. The existence of idiopathic unilateral epilepsy has been discussed, and such a condition is clearly recognized, even status hemiepilepticus of idiopathic character. Shall we or shall we not operate in such a case as that mentioned above? I am distinctly in favor of exposing the brain at the region indicated by the symptoms. The possibility that we may not find anything abnormal is not to be ignored, and yet the hope in operating on brain tumors lies in the removal of the tumors while they are small. The motor area responds promptly to the irritation of a small tumor that might remain latent in many other parts of the brain. If this recommendation be followed, operations will probably be performed without revealing tumors, but that is the less of two evils. I am well aware also that the mere opening of the skull may prove fatal, occasionally by infection of the brain, as when a patient in stupor disturbs the bandages; or by postoperative hemorrhage from a small vessel, or by injury of one of the large venous sinuses with extensive hemorrhage, or when a piece of bone is removed for decompression and occlusion of vessels in a cerebral hernia occurs with extensive cerebral softening, or, still more rarely, from some unknown or remote cause as pulmonary embolism. I have seen death produced in all these ways, and yet we must remember the extreme seriousness of brain tumor; that operation alone affords any hope of recovery or of prolonging life, unless perhaps in tumor of the pituitary body, which is often of slow growth; and that operation must be done early if it is to be successful. Therefore, when symptoms are persistent, indicate a focal lesion of the brain, and are gradually increasing, even though general symptoms of increased intracranial pressure are absent, such as papilledema, headache, nausea and vomiting, I believe that as a general rule operation is advisable if the lesion, as shown, for example, by Jacksonian epilepsy, gives any reasonable hope of being found near the surface of the brain. Palliative operation is not to be considered in such a case as I have described, because the occasional unilateral spasms, the slight aphasia and slight hemiparesis would not seem to warrant it. Decompression, in my opinion, is more serious than mere exposure of the brain with return of the osteoplastic flap to its proper position—more serious because from the removal of a portion of bone, the size or less than the size of a silver dollar, a hernia cerebri is very likely to occur, and sometimes the hernia becomes very large, even becomes infected and forms fungus cerebri, or by pressure of the brain against the bone and occlusion of vessels leads to extensive cerebral softening.

In one of my cases of probable tumor of the pituitary body (G. S.) in which the most important symptoms were bitemporal hemianopsia, some mental dulness, tendency to jocosity, and marked asthenia, a peculiar sexual disturbance was present, first detected by Dr. Thompson S. Westcott, under whose care the patient had been. This patient had failure of ejaculation with preserved normal sexual desire and normal erection. It is well known that the genital functions in both male and female are impaired or lost as a result of lesion of the pituitary body, but the dissociation of the sexual functions, as manifested in this case, is unusual, and like that which sometimes occurs from lesions low in the spinal cord.

The diagnosis of frontal tumor is often difficult. In one of my recent cases I depended on the jocosity (*Witzelzucht*) and apathy, in connection with general symptoms in diagnosing frontal tumor, and the tumor was found in the frontal lobe; when, however, we try to decide between the right and left frontal lobes we often are helpless. The patient to whom I refer (R.) had come for the purpose of operation from a distant city. He informed me when I asked for his hand in examination that he had four hands, and this he said as a sort of joke. Such a statement as this under such serious circumstances indicates a peculiar condition of the brain, and probably a frontal lesion.

In one case only have I seen a pressure palsy of the seventh nerve follow operation, and in this it was caused by the head-rest and was of short duration. The facial nerve is not likely to be affected by any pressure from without, but pressure palsy of it has been reported. Knapp, in a case reported by him,[14] found that it resulted from sleeping a couple of hours with the cheek on the table. When the man awoke the face was paralyzed on one side from the pressure, and the faradic and galvanic reactions of this side were quantitatively diminished. Recovery occurred within about four weeks.

The symptoms of brain tumor may be caused by a variety of lesions, especially well recognized in this connection are brain abscess, hydrocephalus and meningitis, more commonly the syphilitic or serous variety of the latter, and a considerable amount of literature has appeared on pseudotumor. My attention has been called recently to some of the rarer lesions of the brain which may simulate tumor closely, and because of their infrequency may be more likely to cause a mistaken diagnosis, and even lead to operation. Of these lesions, polioencephalitis, thrombosis of the cerebral vessels, and thrombosis of the venous sinuses are especially noteworthy.

The following is a case illustrative of the difficulties that may be caused in diagnosis by polioencephalitis:

A girl, 14 years of age, was referred to me by Dr. F. H. Macfarland, June 24, 1908. She had been well until about six weeks previously, at which time the right lower limb began to grow weak, and in about one week the right upper limb also became weak. The paresis of these two limbs became gradually greater and was associated with nausea, vomiting, headache and unilateral convulsions.

14. Knapp: Monatsschr. f. Psychiat. u. Neurol., October, 1905, p. 309.

At my examination after her entrance to the hospital the child was weak in the lower part of the right side of the face, and in the right upper and lower limbs, especially in the lower limb. No form of aphasia and no disturbance of sensation were present. The tendon reflexes were exaggerated, the right more than the left, and patellar clonus was obtained on the right side. Babinski's sign was pronounced on the right side.

One of the convulsive attacks was carefully observed. It began with numbness in the right upper limb and soon extended to the right lower limb; the right side of the face was drawn up and held rigidly distorted. The left side of the body was not implicated. The right side of the body was rigid about four minutes, without any clonic movements, and the child was unable to move the right upper and lower limbs about two hours following the attack. She did not lose consciousness.

It is very evident from the record here presented that we had to deal with a focal lesion of the brain. The duration of symptoms for about six weeks; headache, nausea, vomiting, progressively developing right hemiplegia, right-sided convulsions, made the diagnosis of location in the motor region positive, especially as all sensory disturbances and hemianopsia were absent. The symptoms were those of some lesion gradually increasing in size, and more like those of tumor than any other lesion. This diagnosis was rendered more probable by the report from Dr. de Schweinitz, which was as follows:

Vision 5/6 in each eye. Beginning papillitis in each eye; nasal, upper and lower margins obscured, temporal still visible, veins full. Pupils react normally, no muscle palsies.

Believing that the symptoms warranted an exploration, I requested Dr. Frazier to operate over the left motor area, and the brain was found distinctly diseased in this part. A portion of the tissue was removed, as at the operation it was impossible to exclude glioma, as the diseased tissue, especially after the brain had been exposed a short time resembled glioma. When the flap was first turned back the lesion impressed us as probably one of encephalitis. The microscopic examination revealed polioencephalitis.

The extreme difficulty that may occur in diagnosing between polioencephalitis and brain tumor is well shown by this case, as papillitis is not a common sign of the former condition, although known to occur. I am quite sure that fever was not present at any time while the child was under my observation, and no statement regarding the existence of fever was made by those who had had charge of her in the onset of the symptoms. The temperature charts taken at the hospital were mislaid.

For a time hemiplegia was increased after the operation, but power was regained later on the right side to the extent that the gait showed only a little limp, but the paralysis of the right upper limb was pronounced.

In the report of the committee appointed by the New York Neurological Society to study the epidemic of poliomyelitis occurring in New York during the summer of 1907, embracing an examination of 2,000 cases, Dr. B. Sachs[15] remarked that few cases lent support to Strümpell's view that there is a polioencephalitis closely allied to poliomyelitis; and yet non-purulent polioencephalitis unquestionably occurs, as shown by the case referred to. I have specimens also from three or four other cases.

15. Sachs: Jour. Nerv. and Ment. Dis., Oct. 19, 1909.

In another case the diagnosis had to be made between cerebral thrombosis and brain tumor. This usually causes little perplexity, but the following case in the service of Dr. John H. Musser shows that the diagnosis may not be easy. The man had had the symptoms about a year, namely, frontal headache, later left-sided headache, word-blindness, occasional loss of memory, vertigo, nausea, vomiting, subjective weakness of the right upper limb, later paraphasia, some word-deafness, right lateral homonymous hemiamblyopia, dissociation of color sense, and ataxia of the right upper limb. The case has been referred to in my recent paper[16] read at the meeting of the American Medical Association in June, 1909.

The diagnosis between tumor and softening from thrombosis was not easy. The absence of papilledema did not exclude tumor, as I have known glioma of the occipital lobe to reach a considerable size without causing any swelling of the disc. There was unquestionably a gradual increase in symptoms, and this was very suggestive of tumor, but the increase seemed to occur rather abruptly, within a few days, and then no further increase was observed for weeks. This might occur in tumor, and is sometimes seen in thrombosis when the thrombus extends further in the vessel first occluded, or extends into a branch of this vessel. The age of the patient could not help us, for while thrombosis is not uncommon at the age of 60, glioma also may develop at this period.

There could be no doubt as to the position of the lesion. The word-blindness, word-deafness, right lateral homonymous hemiamblyopia, etc., made the first temporal convolution of the left side the seat of the lesion.

The visual disturbance in this case was very interesting. At no time could I find complete hemianopsia. The man could always recognize the movements of objects in the right fields, but he could not distinguish well between objects in these fields, and was positive that he saw them less distinctly than he did in the left fields. Here probably was an important sign in favor of thrombosis. It might readily be overlooked and called hemianopsia, but in my examinations it was never more than hemiamblyopia. It indicated in connection with the other symptoms that a lesion was present which had a considerable superficial extent in order to produce word-blindness, word-deafness, etc., and yet did not extend far toward the optic radiations, which are not remote from the first temporal convolution. Such a lesion would more likely be thrombosis than tumor. Therefore, in the indications that the growth was large but chiefly superficial, and in the rather abrupt increase of symptoms, we had two signs in favor of thrombosis rather than tumor.

After careful consideration, even though the diagnosis of thrombosis of the posterior branch of the middle cerebral artery was made as probable, exploration seemed advisable, as it was at least possible that a tumor would be found. The patient and his relatives wanted some active intervention. I therefore requested Dr. Frazier to expose the brain with the posterior part of the left first temporal convolution as the center of the opening. The operation revealed unmistakable thrombosis in the region diagnosed as affected, and a piece of the diseased tissue excised and examined microscopically showed softening. The man made an excellent recovery.

Another case resembling the one just reported was one I had the opportunity of studying in 1900 in association with Dr. Mills, under whose care the patient

16. Spiller, W. G.: Brain Tumor, THE JOURNAL A. M. A., Dec. 18, 1909, liii, 2078.

was. Dr. Mills has published a report of this case.[17] The man had impaired recognition of objects in the right hand with the eyes closed, diminution in pain and temperature sensations on the right side of the body, word-deafness, word-blindness, paraphasia and right lateral hemianopsia. The first symptoms appeared in the early spring of 1898. The patient suddenly became dizzy and was numb in the right upper and lower limbs. The numbness soon disappeared, but recurred at intervals lasting a few moments at a time. The patient had no other symptoms of importance until he began to have headache in February, 1900. The headache was not continuous, but the attacks of numbness became more and more frequent. Dr. Mills first examined the man on June 2, 1900, at which time he had the symptoms above enumerated. Dr. de Schweinitz found high myopic astigmatism, but no positive optic neuritis, although he stated that the condition was such as to indicate the possibility of an incipient nerve inflammation. The congestion of the optic discs present at previous examinations could probably be attributed to disorders of refraction, and was more marked on the left side. The left side was the side of the lesion.

About June 23, 1900, a decided paresis of the right half of the body developed and operation was decided on and was performed by Dr. W. W. Keen, assisted by Dr. William J. Taylor. An area of softening in the distribution of the Sylvian artery was found and was caused by thrombosis.

The whole condition was evidently of vascular origin. The early symptoms were dependent on impaired nutrition of the parietal lobe, the symptoms which developed acutely about three months before the operation were caused by thrombosis of the branches of the Sylvian artery supplying the first temporal convolution and parietal lobe, and the weakness of the right arm which came on suddenly was the result either of thrombosis of the branch supplying the arm center or of hemorrhage occurring within the softened brain tissue.

The most interesting features of this case were the successive abrupt increases in symptoms, indicating that additional areas of the brain had become affected. The weakness of the right upper limb developed suddenly, not very gradually as is suggestive of tumor, and yet in tumor paralysis may develop rapidly.

Thrombosis of a venous sinus also may cause difficulty in diagnosis, as shown by the following case referred to me by Dr. William Zentmayer. The patient had presented the general symptoms of brain tumor about a year, some of the symptoms preceding the others several months. They were headache, nausea, vomiting and choked discs. As symptoms of localizing value were tinnitus in the left ear, weakness of the right external rectus muscle, some diminution of each patellar tendon reflex and of each Achilles tendon reflex, tendency to go to the right in walking, and, most important of all, diminished sensation to touch in the right scleral conjunctiva and cornea, and to touch and pain in the right forehead, and possibly slight diminution to pain sensation in the right infra-orbital region, without disturbance of the motor supply of the right fifth nerve.

The case seemed to be one of brain tumor, but the localization was not easy. The tendency to go to the right and the diminution of the patellar reflexes were slight and not of sufficient importance to weigh much in diagnosis. The tinnitus of the left ear probably was from ear disease. The only important localizing signs were weakness of the right external rectus muscle and partial impairment of objective sensation in a portion of the right fifth distribution, distinct only in the right forehead and the right eyeball, and more so in the latter. Paresis of an external rectus muscle first observed late in a case is of doubtful diagnostic value. The objective disturbance of sensation in the distribution of the right fifth nerve was, therefore, the most important sign, but this was not complete, varied in different examinations, was only in a small portion of the fifth nerve distribution, and was without any implication of the motor fifth. I could not doubt that the fifth nerve was implicated in the lesion, but the symptoms were not sufficient to justify exploration of the base of the brain, especially as the patient had never had signs of irritation of this nerve, namely, pain or tenderness to pressure over the points of exit, and spontaneous pain. A glioma of the pons could cause the slight disorder of the fifth nerve without other symptoms if the tumor were small. I have recently called attention to this possibility.

The study of this case did not seem to warrant a basal operation, and, therefore, in the hope of relieving the patient of headache, nausea, vomiting and vertigo, I requested Dr. Frazier to do a subtemporal decompression, believing that later a basal operation would be called for if the symptoms became more decided.

The hernia of the brain that developed caused much pressure of the right frontal lobe and motor region by the protrusion of the brain through the opening, and the cutting off in this way of the blood-supply. Softening of the brain in the area of the occluded vessels occurred, and a purulent meningitis was produced by the patient handling the dressings and the wound before he could be restrained.

The findings in this case were extremely interesting. The necropsy was performed by Dr. H. T. Karsner, who kindly gave me the brain for examination.

A thrombus was found in the right inferior petrosal sinus extending into the cavernous sinus, and causing a depression in the pons. It was about an inch in thickness and about an inch and a quarter in length. The clot was shown by the microscope to be well organized. Whether the thrombus had its origin in some disease of the sinuses communicating with the nose or not, it is impossible to say.

1906 Chestnut Street.

17. Mills: Philadelphia Med. Jour., April 20, 1901.

THE IMPORTANCE OF ANIMAL EXPERIMENTATION IN THE DEVELOPMENT OF OUR KNOWLEDGE OF DYSENTERY, CHOLERA AND TYPHOID FEVER *

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Before successful warfare can be waged against an infectious disease it is of the highest importance, if, indeed, it is not absolutely necessary, to know with precision the nature of the agent which produces that disease, how it invades the individual, what its method of action is, how it is excreted, and, finally, how it perpetuates itself outside the living body.

* This article is one of a series issued in pamphlet form by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Eight of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, etc.

In studying the possible causes for any such infectious process, the suspected causative agents must be applied under strict scientific control either to members of the human or of the animal species to see whether under fixed conditions there is a definite relation between the suspected causes and the effects produced by them.

Typhoid fever, cholera and dysentery are diseases associated symptomatically and pathologically, in the great majority of instances, with the intestinal tract, and in the search for the causes of these diseases it was natural that study should focus itself on the rich bacterial flora of the intestines. This study, under the influence of new methods developed during the past twenty-five years, brought to light from the diseased intestines a great variety of living organisms, and the relation of any or all of these to the diseases under consideration offered a problem of the greatest complexity. To inoculate human beings with the various organisms found was manifestly impossible. Recourse to the use of the lower animals, therefore, had to be taken, and in the pursuit of knowledge concerning these diseases many thousands of animals have, undoubtedly, been sacrificed. It was found early, however, that, though many of the intestinal germs caused sickness and even death in the animals used, a clinical picture characterized by symptoms relative to the intestinal tract was rarely produced. An important link, therefore, in the chain of evidence connecting the germ with the human disease was lacking.

In the early nineties, however, an important discovery was made by R. Pfeiffer—a discovery which has in many ways revolutionized our knowledge of bacterial disease.[1] Pfeiffer found that by inoculating guinea-pigs and rabbits with gradually increasing numbers of different races of bacteria, he could at last bring the animals to a state in which they could stand without symptoms doses which, at first, would have proved fatal. In other words, the animals had become immune. In fact, they resembled the man who, having passed through typhoid fever, rarely has it again.

In the further study of this phenomenon, Pfeiffer investigated the fate of cholera and typhoid germs when introduced into the peritoneal cavity of guinea-pigs, and found that, whereas in the untreated animal the bacteria grew rapidly and soon caused death, in the immune animal the germs became clumped together and gradually dissolved, the animal remaining in good health.

This clumping and dissolution of disease germs in the peritoneal cavity of guinea-pigs under the influence of specific immune agents is known as Pfeiffer's phenomenon, and constitutes one of the greatest contributions to our knowledge of infectious disease, for it soon became clear that similar results could be obtained if the germs were put into the peritoneal cavity of an untreated guinea-pig, provided that blood-serum from an immune animal was introduced at the same time.

The next step was to show that the serum from the sick human being would bring about similar results with the suspected organism, and the chain linking the germ to the human disease was thereby made complete.

Incidentally, however, much more was accomplished. It was next discovered that typhoid and cholera germs would undergo in a test-tube the same clumping, and sometimes the same disintegration, as that seen in the guinea-pig when brought in contact with typhoid and cholera serum, and this fact, further elaborated by Gruber and Widal, has brought the so-called Widal test—a procedure most valuable in the diagnosis of typhoid fever and many other infectious diseases.

From a known variety of serum, therefore, we can now in many bacterial diseases determine with great exactness whether a suspected germ is the one corresponding to that serum, and, *vice versa*, given a known germ, we can determine from the blood-serum whether a sick man or animal is suffering from an infection due to that germ.

The importance of these discoveries can hardly be overestimated. For example, a patient is found to have a fever with symptoms referable to the intestinal tract. An organism is isolated from the stools and shows with a known cholera-serum a specific reaction. From this knowledge it becomes certain that the patient is suffering from cholera; he is properly isolated, and possible danger to those in his surroundings is removed. Similar procedures are possible, furthermore, with typhoid and dysentery. It is impossible to say how many lives are saved annually and how much disease and suffering are prevented through these methods of diagnosis alone, made possible by the discovery of Pfeiffer's phenomenon.

This work of Pfeiffer, moreover, was of equal if not greater importance in another direction. As stated above, Pfeiffer found that by inoculating animals with gradually increasing doses of disease germs the animals could be made immune against these specific diseases. Furthermore, it became plain that the blood-serum of an animal which had been made immune to a certain infection would give protection when introduced into the body of a normal animal. This fact stimulated investigation all over the world and, as a result, we now have not only means for preventing the occurrence of disease but also for its cure when once acquired.

For the prevention of the three diseases under discussion the method commonly employed is that of protective inoculation, which, as above stated, is a direct outgrowth of experimental work on artificial immunity in animals. Subcutaneous injections are made of dead bacteria in varying amounts, from which injections there results, at most, a mild and transient illness.

The human body, however, having overcome the infection in mild form, is for considerable periods of time thereafter in a condition to resist with unusual strength any subsequent exposure to the disease.

In cholera, for instance, Haffkine[2] found that the incidence of the disease among those inoculated was one-tenth that among the uninoculated.

As to bacillary dysentery, Shiga[3] inoculated in Japan 10,000 people with a mixture of dead bacilli and specific dysentery serum. The incidence of the disease was, to be sure, not much affected, but the death-rate was reduced from 25 per cent. to practically nothing.

In typhoid fever, protective inoculation has been practiced to a considerable extent, especially in the British army. Leishman[4] states that of 5,473 soldiers who were inoculated only 21 became subsequently infected, and of these but 2 died. Of 6,610 soldiers uninoculated but in the same regiment, 187 had typhoid fever and 26 died.

During the Spanish-American war, out of 107,973 enlisted men 20,738 had typhoid fever and 1,580 died of the disease. According to the English experience, protective inoculation in typhoid fever, impossible except through knowledge gained by animal experimentation, would have saved thousands of American soldiers from sickness

1. Pfeiffer: Ztschr. f. Hyg., xix, 75; Pfeiffer and Kolle: Ztschr. f. Hyg., xxi, 203.

2. Haffkine: Bull. de l'Inst. Pasteur, Sept. 15 and 30, 1909.
3. Shiga: Osler's Modern Medicine, 1907, ii, 800.
4. Leishman: Jour. Roy. Army Med. Corps, February, 1909.

and hundreds from death, to say nothing of the secondary typhoid fever spread by these soldiers throughout the country during their convalescence, for, as is now known, about 4 per cent. of persons who have typhoid fever become chronic carriers of the disease, through the presence of typhoid bacilli either in the stools or urines, or both. Similar conditions obtain in cholera and dysentery.

The rôle of carriers in the spread of these infections is a most important one, and one unsuspected until within recent years. The knowledge that such individuals may exist in any community will strengthen to a very great extent the hands of the health officer in checking the ravages of these diseases, but this source of infection could never have been discovered had not the lives of many animals been sacrificed in establishing the identity of the specific organism.

Protective inoculation for typhoid fever has been introduced recently into the United States army. I have instituted this practice[5] at the Massachusetts General Hospital among the nurses and ward tenders, who, during the summer and fall seasons, are especially exposed to this disease.

Stimulated by the success attained through the use of antitoxin in diphtheria, much experimentation has been done in an effort to secure similar protective serums for cholera, dysentery and typhoid.

With cholera, the results thus far have not been very encouraging. In dysentery, however, favorable reports of serum treatment of those afflicted with the disease come from Russia, France, England, Austria and Japan. Shiga, for instance, treated 298 dysentery patients with a death-rate of from 9 to 12 per cent. In 212 patients treated with drugs the mortality was 22 to 26 per cent. In typhoid fever, Chantemesse[6] treated 1,000 cases with a death-rate of 4.3 per cent. Of 5,621 patients to whom routine treatment was given during the same period, 17 per cent. died.

As the result, therefore, of the combined studies of research workers throughout the world during the past thirty years, we know what causes cholera, dysentery and typhoid; we know how the diseases are transmitted; we know how to determine whether or not an individual has one of these diseases; we know how to protect a human being against these diseases; and, finally, how to help him intelligently when he is sick.

To gain this knowledge, experimentation on many thousands of animals has been necessary. Can there be any doubt that this experimentation has justified itself?

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ALCOHOL AS A POISON

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The very common theory that alcohol is a tonic and stimulant, at times a valuable medicine, and always a safe beverage, when used in small quantities and with care, and when the quality is good, is fallacious and has no support in modern scientific studies.

The toxic action of alcohol is a well-recognized fact. Its poisonous action depends on the quantities given over long periods of time. A presumptive theory is urged that this drug has two distinct physiologic actions, one tonic and beneficent, the other toxic and destructive, and that the province of the physician in using it is to know how to secure the former effects and avoid the latter.

This opinion, in many instances, is accepted without question. In reality, there are many drugs whose toxic and destructive action on cell and tissue are controlled and made to contribute to medicinal purposes.

Thus, opium is a toxic agent, yet in small doses this narcotic toxic action on the cells and nerve terminals may be made to contribute to restoration by diminishing the sensitiveness and activity of the cells. Again, the anesthetic properties of alcoholic ethers in chloroform and sulphuric ether are distinct poisons, and yet their use has made possible the most brilliant work in surgery.

The toxicity of alcohol has been emphasized more and more with every advance in scientific medicine. The unfounded theories of the past built up on delusive experiences and perpetuated in text-books are disappearing with every exact laboratory study and clinical research.

These researches point out conclusively that alcohol has a toxic action on cell and tissue, varying only in accordance with the quantities used, and that physiologically it is the same in all conditions, the difference being in degree, and that previous studies of its therapeutic effects furnish no guide which can be followed except after critical examination and study. In brief, the alcoholic problem, including the action of alcohol and the results which follow, must be studied at the bar of scientific analysis, irrespective of all theories, opinions or conclusions of the past.

ALCOHOL A PROTOPLASMIC POISON

A poison is clearly defined as any substance which acts on living cell and tissue to destroy its power and impair its activity. Alcohol is clearly a poison according to this definition.

Dr. Kesteven, of London, in a recent study, showed that alcohol was distinctly toxic to the ameba, and the simplest forms of protoplasm. These cells being concentrated in the microscopic field and treated to a 1 per cent. solution of alcohol, a distinct narcotic action was apparent which lasted several hours.

In a 2 per cent. solution the narcotism was deepened and every cell was stiffened. Some of them died. Others recovered after a while. In a 4 per cent. solution a very large percentage died, and a 5 per cent. solution was fatal to all cell life.

This experiment can be repeated in every laboratory and is confirmed by a great variety of studies in other directions, showing that alcohol is a distinct protoplasmic poison. A number of observers have shown that this poisonous action is due to the retarding power of the cell to absorb oxygen.

The action of alcohol on lower forms of cell life has been the subject of many remarkable investigations.

Professor Rauber of Vienna, the late Drs. Richardson and Ridge of London, and Professor Hodge of Worcester have conducted extensive experiments, showing that alcohol is not only a narcotic and paralyzing agent on protoplasm in all forms, and that this is apparent in very small doses, as low as one drop of alcohol to a thousand drops of water, but that it is also injurious to cell life.

A very common experiment can be made with the growth of plant life and seeds. Thus pots containing similar soil and the same kind of seeds are treated with clear water and with water containing alcohol in propor-

5. Richardson, M. W.: Am. Jour. Pub. Hyg., August, 1909.
6. Chantemesse: Hygiene gèn et appliqué, 1907, p. 577.

tions of one to one hundred, one to five hundred and one to one thousand.

The difference in the growth is very pronounced, although all are treated exactly alike in other respects. The seeds treated with pure water come up strong and vigorous; those treated with alcohol and water show a decided retarded growth, and many of them die.

The uniform inferiority of the plants treated with alcohol and their stunted defective growth indicates the poisonous action of alcohol on the cells. This experiment can be repeated in a great variety of ways on ordinary flowering plants or the growth of seeds seen in a transparent medium.

A very common experiment of dwarfing puppies for the purpose of changing the breed by giving alcohol in food is another very marked illustration. The small quantity of alcohol used indicates beyond question its continuous toxic action on protoplasm.

Under very high microscopic power, cells when immersed in a medium containing very minute quantities of alcohol shrink and become distorted; evidently there is some dehydrating effect, absorption of water, retraction of the hyaloplasm and, no doubt, a paralyzing irritant action.

A larger solution of alcohol makes greater impression on the walls of the cell; the granules gather in clusters, their activity ceases and their forms break down.

The inference is unmistakable that the same action so marked on cell life in plants and animals is the same in the human body, and that its toxicity to protoplasm is beyond all question.

ALCOHOL AS A CHEMICAL POISON

This action is equally prominent. The sensation of coldness following its application on the surface of the body is due to its rapid absorption of water. When alcohol is taken in the mouth as a beverage, this dehydrating property is so pronounced as to produce irritation and this would rapidly lead up to inflammation. Hence the use of water with spirits is physiologic and simply an effort to overcome its corrosive action.

This chemical absorption of water by alcohol extends to every tissue with which it comes in contact until it reaches the point of saturation. The feeling of warmth in the stomach is the first stage of irritation which would rapidly extend to inflammation and pain.

The value of alcohol applied to the surface of the body as a refrigerant or cooling substance is its chemical, dehydrating, water-absorbing properties. An alcoholic sponge bath is simply chemical absorption of the moisture on the surface of the body, and thus diminishing the temperature, but principally drawing the water off from the capillaries.

This dehydrating property is very marked; an examination of the blood shows it in the shriveled blood corpuscles and diminished phagocytes, particularly in persons who are paralyzed and profoundly intoxicated. The temperature is lowered and the functional activity is reduced almost to the point of suspension.

Some very interesting studies have been made of the resistance and immunity of the body to this chemical absorption and derangement of the fluids. While the dehydrating effects are uniform in a general way, there are some organs which seem to suffer more than others. The corrosive effects are not noticed in all the organs alike.

Sometimes the liver, the kidneys or the brain tissues are most markedly disturbed. In other cases they are less so. There can be no question about the two conditions present; one, the abstraction of water from the cell and tissue, the other the coagulation of albumin, the deposit of fibrin and the pronounced disturbance of the balance necessary to carry on the uniform functions of the body.

ALCOHOL AS A CIRCULATORY POISON

The effect of alcohol on the circulation is very evident from the increased action of the heart, the congestion of the blood-vessels of the face and other significant signs. This increase of the action of the heart is followed by depression, and with instruments of precision the rise and fall of the heart's action is measured with exactness.

The muscular output from the increased action of the heart is followed by a similar diminution in exact ratio to the high level which it had attained. This toxic action due to the suspension of the control centers and vasomotor paralysis can be studied on the mucous membranes and the congestion of the face, and extends, disturbing the circulation, to the liver, kidneys, brain and all the vascular organs.

Often the face is a good index to this deranged circulation, and paralysis of the facial nerves extends to the brain. The man with an alcohol-paralyzed face has a similar derangement of the cortex of the brain.

The physiologic effect of deranging and paralyzing the circulation of the blood in the veins and arteries is followed by a diminished absorption of gases, defective distribution of nutrient plasma, and checked elimination of waste products. The direct result is poisoning and starvation, with depression, fatigue and finally organic changes.

This particular poisonous effect on the circulation extends to the respiratory system and is manifested in various ways. The diminution of the vasomotor control of the arteries and veins is followed by congestion, formation of toxins, and the retention of waste matter.

The spasmodic action of the heart to overcome this condition and restore the lost balance is noted in fatigue, which falls most heavily on the lungs and nerve centers. Hence, pneumonia, occurring in persons who have used spirits, is very frequently fatal, because of the defective circulation, vasomotor paralysis of the capillaries and diminished vitality. Giving alcohol as a remedy for this condition is increasing the difficulty and making fatality more certain. In the same way, giving spirits for tuberculosis has no support in any modern physiologic or pathologic studies.

At the recent antialcoholic congress in London two papers were read on the increased mortality in cases of pneumonia from the use of spirits as a remedy. A study of over 2,000 cases, in which half were treated without spirits, showed a mortality of 31 per cent. when spirits were used, and without it 19 per cent.

In another study of 500 cases of tuberculosis, the use of alcohol was followed by a mortality 40 per cent. higher than in those cases in which no spirits were given. There is evidently a very wide field here in which the poisons of alcohol on the circulatory system when fully recognized will revolutionize many of the practices of to-day.

ALCOHOL AS A POISON TO THE BRAIN AND NERVOUS SYSTEM

The effect of alcohol on the brain and nervous system is familiar to all ordinary observation. The intoxicated man on the street either stupid or with delusions shows the toxic action of alcohol very markedly. These extreme toxic stages are only terminal conditions of

what may be traceable back to the smallest quantity of spirits.

Many years ago Kraepelin of Heidelberg began a series of observations to determine the effects of alcohol on the brain and nervous system. He assumed that finding a normal standard of sensory and mental activities in different individuals, then giving spirits and comparing these conditions with what existed before, would determine the exact action of alcohol on the person.

Thus, the personal equation in a certain individual having been found, from one dram to a half-ounce of absolute alcohol was given him; then he was measured with instruments of precision from forty minutes to one hour afterward. The difference, other things being equal, was due to alcohol.

These experiments have been carried on for many years by Kraepelin and other observers. They indicate uniformly that alcohol in small doses both impairs and diminishes the activity of the senses, and that this derangement is measurable, although not recognized by the persons experimented on.

Thus a person able before the use of alcohol to distinguish letters or hear sounds at a certain distance, after the use of alcohol suffers impairment of vision and hearing, which can be stated in exact figures. The same way in the sense of smell, taste and touch, and these can be stated in exact terms.

Going beyond the senses, similar studies of rapidity of mental action, power of reasoning, capacity to judge and memorize, emotional control, fatigue, muscular output, endurance and other mental activities are studied and measured, both before and after the use of alcohol; and a table of this diminution and paralysis can be made with as much exactness as one stating any mathematical problem.

The results from a great variety of observers have been singularly uniform and confirmatory of the fact that the action of alcohol is narcotic and paralyzing in all instances, and even in very small doses, and that there is no tonic, stimulant or any other action from its use.

Hence, the word "paralysis" is exact and literal in describing the action of alcohol on the body. From a great variety of observations, clinical studies, and everyday experience, there is a tremendous confirmatory flood of evidence. Thus in accidents and mistakes and a great variety of faults and errors, there is unmistakably a paralytic action of alcohol in perverting, diminishing and deranging the sense impressions, their receptivity, and the capacity of the brain to judge of the conditions and their relation.

These laboratory researches give no support to previous theories that alcohol in any form gives power, capacity or strength that did not exist before. On the contrary, it brings out markedly delusive effects and indicates that in some persons a single dram of absolute alcohol produces measurable effects of narcotism and paralysis. In others a larger dose is required. The literature on this particular poisonous action of alcohol has grown to great proportions in volume, pamphlet and proceedings, and it would require hours to simply summarize it.

POISONOUS ACTION OF ALCOHOL ON METABOLISM, NUTRITION AND DIGESTION

Another toxic action of alcohol, namely, its effects on metabolism, nutrition and digestion, has attained prominence as the result of a mass of laboratory researches, clinical experience, delusive theories and widely differing opinions.

Atwater's most unfortunate reasoning and deductions gave great prominence to the subject, brought out a variety of facts that were practically unknown before, and established others on a permanent foundation. The oxidation of alcohol, the liberation of energy, and its supposed protective power have been subjects of a great deal of reasoning, but the final conclusion, that its irritant, paralyzing and corrosive action always precedes and follows these chemical changes, has been fully established.

A number of the most eminent physiologists in this country have examined this subject with great exactness, and all conclude that in no sense does alcohol give new force or generate new power in the body, and in no way can it be called a food, building up and restoring lost energies.

It is pleasant to note that the epoch-making studies and papers on this point of Professor Abbe of Johns Hopkins, Professor Benedict of the Wesleyan University, Profesor Hall of the University of Chicago, Professor Beebe of Cincinnati and Dr. Reid Hunt of the U. S. Public Health and Marine-Hospital Service, and others, have been supported by the most eminent foreign authorities and laboratory physiologists. While these authorities differ on minor points and give greater prominence to some phases than others, there is a remarkable agreement among them that alcohol is a metabolic poison, introducing into the system toxins which not only grow themselves, but favor the growth of other ferments and toxins, and are followed by conditions of profound derangement and degeneration.

This toxic quality is aptly summed up by Sir Victor Horsley in the following statement:

> **The toxic action of alcohol lowers the energy and vitality of the body. It diminishes the production and maintenance of heat; it interferes with nutrition, and the absorption and utilization of plasma; it increases the waste products and checks elimination.**

In confirmation of this there is a great variety of clinical evidence and laboratory studies which would require volumes to enumerate. One practical point very often observed is neuritis, an inflammation of the nerve terminals, due directly to alcohol and called rheumatism, gout, and various other names. It is the result of the corrosive action of spirits on the dendrites. The same toxic action of alcohol on the liver, kidneys and in the stomach is followed by a great variety of the most complex disturbances which are not understood and cannot at present be explained with any clearness or satisfaction.

The very extreme toxic states due to alcohol and complicated with other toxins have had a beginning, are the result of long use of spirits, and are simply the chronic stages of what began long before.

This is in accord with the uniform laws of degeneration and disease processes.

Prof. George Harley of London has analyzed the metabolic poisoning from alcohol at some length in a recent study. The following sentence is an outline view:

> **The normal oxidation of the blood is retarded and broken up by alcohol, and with it the process of storing up nutriment; the manufacture of secretions and their distribution, the production of energy, and muscular output, are all diminished and lowered; and with it all the excretion of waste material is checked, and becomes the soil for the growth of new toxins and ferments; therefore alcohol is clearly a metabolic poison of the most pronounced character.**

ALCOHOL AS A SYSTEMIC POISON

Alcohol has been termed by many writers of eminence a systemic poison, and the evidence on which this view is based is the subject of very extensive literature. The central fact of this is that alcohol particularly diminishes the vitality of the body and the resisting power to overcome disease. Professor Laitiner, in the Norman Kerr Lecture, recently delivered in London, brought out this fact very prominently, in the conclusions of his laboratory studies, extending over several years and based on an examination of over 300 persons. He showed that the normal resistance of the red blood corpuscles was diminished to a measurable extent in all cases in which alcohol was used, and that the bactericidal power of the serum against germ disease, particularly typhoid, diphtheria and other infections, was pronouncedly impaired. The final conclusion from over 1,000 examinations was that from 2 to 4 drams of alcohol showed their injurious influences in the blood-counts and serum-resisting forces of the body. This highly technical paper, which was remarkable for the exact mathematical deductions, will soon be published in full.

Clinical experience brings a great variety of evidence confirming this fact, that the vitality and resisting power of the blood and nerve energies are lowered, and that alcohol is a systemic poison, not only in destroying reparative forces, but in diminishing the combative powers of the blood-cells and developing toxic germs whose activity is noted in the entire body.

This systemic poison is registered in the high-tensioned arteries from vasomotor paralysis, the deposit of fibrin in the liver and other tissues, and the final sclerotic conditions so common in persons who use spirits. It is a clinical fact that the fibrinous deposits due to alcohol resist medication and are practically unresolvable by therapeutic agents, except in the most general way, whereas tumors and growths from specific poisons, tuberculous deposits and syphilis are readily influenced by various drugs and resolvable by a variety of measures.

Belief in the toxic action of alcohol from the smallest measurable doses is supported by a great variety of evidence that is remarkable in its uniform conclusions, particularly that this poisonous action is narcotic, anesthetic and paralyzing in diminishing and lowering the activities of the body.

To all students of this subject it is evident that the wide-spread use of alcohol as a beverage and the delusive theories which have grown up about it in medicine are due exclusively to its fascinating, narcotic action for relief of pain, discomfort and suffering. It is not stimulation that is sought for, but narcotism, anesthesia and relief.

Some of the conclusions from this outline study may be stated as established beyond all question or doubt:

1. The particular poisonous action of alcohol begins with its dehydrating properties, extracting the water from the cell and tissue so rapidly as to produce irritation, then narcotism. The ethers of alcohol, such as chloroform and similar substances, act specifically on the sensory centers, paralyzing them and cutting off all activity. These ethers vary in their action and specific poisonous effects through a wide range, but are all dehydrating and paralyzing in their action.

2. Alcohol acts specifically on nerve cells and nerve centers, cutting off the sensations and disturbing the capacity to judge and reason, particularly of the surroundings and the relations to them. One fact standing out above all others has startling significance, namely, the highest and last-formed faculties of the human brain, the consciousness of right and wrong, the ethical conceptions of duty and responsibility, are the first to become anesthetized and paralyzed from the effects of alcohol.

The third toxic effect of alcohol is its diminution of vital power and capacity to resist disease and degeneration of any form. The defenses of the body are diminished and the conservative reserve powers lowered.

As a result mortality is increased, liability to disease intensified, and capacity for restoration and recovery lessened. This is confirmed in every day's experience. The treatment of all kinds of fevers and local inflammations, and particularly all kinds of surgical operations, is far more difficult, grave and uncertain where the person has used spirits. This is a clinical fact outside of all theories and explanations.

Finally, the toxic action of alcohol, whether given in small or large doses, is not a matter of theory or opinion. There is one fact becoming more and more prominent, namely, that the subject of the action of alcohol covers a wide unknown territory, and that it is exceedingly dangerous to dogmatize and state positively what is and is not true.

The few outline facts which I have given are like mountain-peaks, and the wide ranges of country between them are unknown. I cannot conclude without referring to the unfortunate position of physicians toward the alcoholic problem.

The startled public, led by reformers, clergymen and enthusiasts, is making a great effort to accomplish some practical reform to overcome the alcoholic evil of to-day. Rapacious quacks profit by the situation, making the most delusive assertions and claiming miraculous results; and the medical profession stands by indifferent or in the attitude of sneering critics.

There is no evil of greater magnitude, none of which the cure so entirely pertains to medicine and hygiene, and none so closely related to the work of physicians, as the alcoholic problem. A new and practically unoccupied realm of practice both for preventive and curative measures, is before us. Every medical man should be the teacher and leader in the community, and not the follower of blind theories and stupid delusions.

THE BACTERIEMIA THEORY OF TUBERCULOSIS

A REFUTATION

JOSEPH McFARLAND, M.D., E. BURVILLE-HOLMES, M.D., E. J. G. BEARDSLEY, M.D. AND EUGENE A. CASE, M.D.

PHILADELPHIA

During the past few years Dr. R. C. Rosenberger, of Philadelphia, has made a series of contributions, first, with reference to the reliability of the various methods of staining the tubercle bacillus and other acid-proof bacilli and their resistance to decolorizing agents; second, with reference to the frequency with which tubercle bacilli occur in the feces of tuberculous patients; and, third, with reference to the presence of tubercle bacilli in the blood of persons afflicted with tuberculosis. The logical outcome of these studies, which we know from personal observation were conducted with great pains, patience and perseverance, was a new theory of tuberculosis constructed on the successive steps embraced by the researches. Thus Rosenberger first came to the con-

clusion that for all cases in which differential staining was to be performed the Pappenheim reagent was indispensable; with the aid of this reagent he was able to satisfy himself that tubercle bacilli were constantly present in the feces, not only of those tuberculous patients whose open pulmonary lesions made it probable that they frequently swallowed sputum, but also of those whose closed, partly healed or deeply seated lesions made it evident that the only means by which the bacilli could reach the intestinal contents was by excretion through the liver or intestinal glands from the blood, and that therefore they must circulate in the blood prior to such elimination. Scant attention was paid to Rosenberger's opinions until the final step in the argument was reached and he ventured the opinion, based on 100 per cent. of positive results in a study of 300 cases, that in all cases in which tuberculous infection of any kind occurred the bacilli existed in the blood in numbers permitting their discovery by microscopic examination of the blood itself.

His inevitable conclusion was that tuberculosis was primarily a bacteriemia, which was followed by secondary localization of the organisms and the occurrence of the well-known lesions. This conception was so revolutionary that it could not be accepted without hesitation and without much confirmation.

That tubercle bacilli are at times present in the blood has never been doubted. The occurrence of primary lesions of the bones, joints and deeply-seated organs, and occasional cases of primary miliary tuberculosis show that there must be times when the bacilli find their way through the blood to their seat of primary localization, while the almost invariable occurrence of miliary tubercles widely distributed throughout the body in advanced and fatal tuberculosis, and the occasional occurrence of tuberculous meningitis, as a complication of advanced tuberculosis, point unequivocally to the occasional admission of bacilli to the blood in larger or smaller numbers. This well-recognized condition is, however, a very different matter from the constant presence in the blood of numbers of the microorganisms sufficient to permit their ready discovery by microscopic examination of the blood itself.

The possibility of finding the organisms by microscopic examination, not as a matter of diagnostic importance, but of scientific interest, had, indeed, occurred to one of us (Holmes) as it had probably done to many others, and in February, 1908, some attempts were made by a method suggested by another (McFarland) that did not materially differ from that later published by Staüble or that later was described by Rosenberger. As, however, it was but a matter of interest rather than importance, the attempt was abandoned after it had been made a few times without success.

When, however, it was declared that the discovery of tubercle bacilli in the circulating blood was a diagnostic method exceeding in reliability the recognition of physical signs, and when the occasional discovery of the organisms in the blood of apparently normal persons was interpreted to indicate that they were in a pretuberculous stage of the disease, it seemed time to give the new idea a sufficient amount of attention to permit a correct judgment of its truth or falsity to be formed.

Accordingly a varied series of experimental investigations were begun and carried to completion so recently that they have not yet appeared in the *Reports of the Henry Phipps Institute*. It is because of the unavoidable delay in this publication that this preliminary report is made.

The first experiments had to do with the elimination of tubercle bacilli from the circulation by the bile and succus entericus, and were undertaken by Dr. E. J. G. Beardsley, who began by a patient study of the bacteria of the feces of normal rabbits and guinea-pigs for the purpose of discovering whether any of the usual methods of staining tubercle bacilli would demonstrate the presence of acid-fast bacilli.

It was supposed that the feeding habits of these animals might result in the occurrence of saprophytic acid-fast bacilli in their intestinal discharges, but, in spite of most painstaking and time-consuming efforts, not a single acid-fast bacillus was found. The animals whose feces had been studied were next infected with tubercle bacilli, and frequent examinations of their feces continued during the progress of the disease toward its fatal termination. The guinea-pigs were injected intraperitoneally with a bacillary suspension, and rabbits were injected with a similar suspension of tubercle bacilli into the ear vein. In spite of the expenditure of much time and effort, there was not a single instance in which acid-fast bacilli were found in the feces, though they were commonly present in the urine of the animals. From these researches we were led to the conviction that the tubercle bacillus does not commonly pass from the blood to the intestinal contents either through the bile or the succus entericus.

The next step in the series concerned the length of time that the tubercle bacillus, when artificially introduced, remains in the blood of an experimental animal. It is well known that saprophytic bacteria and indifferent minute particles, if introduced into the streaming blood, are quickly caught in the capillaries and so disappear. To determine whether this was true of the tubercle bacillus, we prepared a fairly homogeneous suspension of dead tubercle bacilli, by grinding them in a mortar, adding physiologic salt solution, drop by drop. After a suspension of a density somewhat greater than that employed for making the opsonic test had been prepared, it was centrifugated for a few minutes, so that the coarser clumps were thrown out and a homogeneous suspension secured. When this was stained and examined it showed the bacilli well divided, clumps of any magnitude few in number, and some of the bacillary substance pulverized by the action of the pestle.

Three cubic centimeters of this suspension were thrown into the circulation of a large white rabbit by means of a hypodermic needle inserted into the posterior marginal vein of the left ear. Blood for examination was secured from the same vein of the other ear at intervals of five, ten, fifteen, thirty, sixty, one hundred and twenty and three hundred minutes, respectively. In order that the slides prepared from these samples of blood might be more carefully examined, two sets were prepared and given to two men in different institutions, each being told he was to check the other's work. This resulted in a rivalry of effort, each being determined that the other should not triumph over him in carefulness; but it is interesting to relate that Dr. Beardsley, who made his examinations at the Phipps Institute, and Dr. E. A. Case, who made his at the Medico-Chirurgical College, came to exactly the same results, both being totally unable to discover any acid-fast bacilli in any of the samples of blood taken from the rabbit. In view of the laborious nature of the experiment and its entirely negative result, it was thought unnecessary to repeat the work, for it seemed to us that the tubercle bacilli must follow the course of other foreign particles and quickly disappear from the circulation.

The third step was an investigation of the blood itself for the demonstration of bacilli in tuberculosis. This part of the work was undertaken by Dr. E. Burville-Holmes, the patients of the Hospital and Dispensary of the Henry Phipps Institute of Philadelphia and the Bryn Mawr Hospital furnishing the necessary cases. At first the Rosenberger technic, learned from its originator himself, was employed, but, as it involved the use of the Pappenheim stain, we found ourselves frequently disturbed by the presence of artefacts that bore some considerable resemblance to bacilli. After a number of experiences of this kind, this solution was abandoned for other methods less apt to be confusing. With this exception the Rosenberger technic was adhered to. The experiments will appear in detail in a paper to be published in the *Report of the Henry Phipps Institute*, but a brief synopsis will be given here, as they are of great interest.

Of the cases at the Phipps Institute, a total of fifty were examined. Of these, forty-nine were cases of undoubted clinical phthisis—pulmonary tuberculosis—representing nearly all the phases or stages of the disease; one was a case in which the clinical findings were, and still remain, so atypical as to make it very doubtful whether the patient is tuberculous or not. In the blood of the forty-nine patients known to be tuberculous, not a single tubercle bacillus could be found; in the one almost certainly not tuberculous, acid-fast organisms were found in very small numbers.

At the Bryn Mawr Hospital four cases were studied. They embrace the cases of (1) a child with acute miliary tuberculosis; (2) a student of the Villa Nova Seminary admitted to the hospital with symptoms atypical in character, but suggesting typhoid, who soon developed meningitis, thought to be tuberculous meningitis, and died; (3) this young man's roommate, who was admitted about a week later, also with meningitis, and in whose cerebrospinal fluid meningococci were present; and (4) an old woman with double senile pneumonia.

In all of these four cases, acid-fast bacilli were found in the blood in large numbers. The contradiction was most perplexing. At the Phipps Institute, forty-nine cases of tuberculosis and no bacilli; one case not tuberculous with bacilli, contrasted with the Bryn Mawr Hospital, where there was one case tuberculous and three not tuberculous, all with bacilli. (Here let it be said that the appearance of the second student with epidemic cerebrospinal meningitis convinced us that the first suffered from the same malady.)

We could not harmonize these perplexing results, and were much disturbed by them. Why should these organisms be found in 100 per cent. of the cases at Bryn Mawr, and always in considerable numbers, when they could be found in only 2 per cent. of the cases at the Phipps Institute and only in small numbers?

Just at this moment Brem published his paper,[1] in which it was declared that the laboratory distilled water, when permitted to stand for some time, became the habitat of an acid-fast bacillus, easily mistaken for the tubercle bacillus, admitted to the specimens of blood during the technical preparation, and leading to erroneous conclusions when the slides are studied.

This suggestion, especially because of the way in which Brem's investigations had been performed, carried conviction with it and opened our eyes to the probable source of our paradoxical results.

Rosenberger, having long before received the suggestion that the micro-organisms he found might be contained in some of his reagents, had carefully examined them, without finding any contaminating organisms, and at the Phipps Institute, the same circumstance having been mentioned, the reagents, including the distilled water, had been carefully examined with negative results.

But Brem first thought to fix the sediment, collected by centrifugation and evaporation, to the slide with albumin and so caught and retained the organisms. This plan seemed to be an excellent one, we adopted it and made a study of the laboratory distilled water at the Bryn Mawr Hospital and at the Phipps Institute. The results were of surpassing interest, for the water from the former institution was found to contain great numbers of acid-fast bacilli, not unlike tubercle bacilli, and resisting the decolorizing effect of Pappenheim's solution, while in the water of the latter institution none were found.

The whole matter immediately became clear, and our paradox explained. At Bryn Mawr, where the distilled water was full of the acid-fast organisms, they entered the blood during the sedimentation following the addition of the citrate solution, or, in the later suggested technic, during the laking of the blood, being caught in the soft film of adhesive material and fixed with it, and so were present in all the specimens of blood derived from tuberculous or non-tuberculous cases. At the Phipps Institute, where the water must have contained exceedingly few of the organisms, they contaminated only one of the many preparations made.

From these experiments and experiences we feel constrained to believe that Rosenberger has been the unfortunate victim of a mistake, the peculiar character of which it was exceedingly difficult to discover. We believe that the presence of these "water bacilli" in the preparation explain most of the cases in which what were supposed to be tubercle bacilli were found in the blood or feces, and that the use of the Pappenheim reagent explains the remainder; that in consequence there is every reason to believe that tubercle bacilli do not often circulate in the blood in quantities capable of ocular demonstration; and that the deductions made by Rosenberger (that tuberculosis is primarily a bacteriemia, and that the easiest and earliest means of arriving at a diagnosis is by an examination of the blood) are unsupported by reliable evidence.

1. Brem, Walter V.: Investigation of Blood for Tubercle Bacilli, THE JOURNAL A. M. A., Sept. 18, 1909, liii, 909.

MIGRAINE *

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In this brief review I shall limit myself to a discussion of what by analogy might be termed "idiopathic megrim" as opposed to the symptomatic hemicrania which we occasionally meet as a manifestation of hysteria, in cases of general paresis, of tabes, of focal lesions of the brain, of periodic ophthalmoplegia and even less frequently in other organic lesions of the cerebrum. This distinction is one which is not infrequently ignored in practice as well as in the literature on the subject, a fact which has undoubtedly contributed in no small measure to the many differences of opinion among the authors.

* Read before the joint meeting of the Chicago Ophthalmological and Chicago Neurological Societies, Nov. 8, 1909.

Idiopathic migraine is a disease which is slightly more common in women than in men. That it is especially frequent in brain workers, as is claimed by most observers, is denied by Moebius. A very large number of famous persons, however, have been sufferers from this malady, and many of those who have discussed it in medical literature have added to our stock of knowledge from their own experience.

The first attack usually occurs early in life—in about two-thirds of all cases supposedly before the twentieth year; and probably this percentage would appear still larger if only the cases of true idiopathic megrim were considered. In one instance, the case of Bohn, the disease is even said to have been congenital. Among the etiologic factors, one overshadows all others, and that is heredity. There is certainly no one nervous disease of a functional nature which is transmitted from parent to offspring as frequently as is hemicrania—no one in which direct heredity plays so important a rôle. In 18 out of 110 cases Kovalevsky could trace the malady through three generations, Mills in one instance even through five generations. Not solely megrim, but other nervous troubles, such as epilepsy, neurasthenic or hysterical conditions, etc., are found in the ancestry of migrainous patients. So common, in fact, is this history of neuropathic taint that it seems at least very probable that without it migraine does not occur.

Gout is supposed by English writers to have an important influence in the genesis of megrim, but the fact that the former is very common in that country and that in other regions where such rheumatic disturbances are rather rare no such influence can be traced, rather discredits the theory. That two maladies, both of which are far from rare, should often be found in the same individual, seems hardly to justify the conclusion that the one is the cause of the other. Among American physicians the theory that eyestrain may produce megrim has found much favor. From my own observation I am not inclined to consider it an important cause of true idiopathic migraine, and least of all can I induce myself to believe that it could produce the disease in a person who is not predisposed to it by heredity, so that at best it could, in my opinion, be considered an exciting cause only, rather than the *fons et origo* of the malady. The same is probably true of nasal troubles and enlarged tonsils, as well as of the infectious diseases, such as typhoid fever, measles, scarlet fever, malaria; of the intoxications, especially through alcohol and nicotin; of trauma, malnutrition, over-exertion, frequent parturition and prolonged lactation. All sufferers from megrim are familiar with the baneful influence of overexertion and worry, grief or prolonged irritation. Very strangely insomnia does not seem capable of exciting an attack. My own personal experience coincides with that of Moebius, who found that the pain was especially liable to appear after an unusually long and sound sleep; in fact, I can produce an attack in myself with almost absolute certainty by sleeping a few hours longer than is my habit. Sexual overindulgence, insolation, foul air in an overheated room, sometimes an indiscretion in diet, may bring on an attack. The vast majority of sufferers from megrim also suffer from chronic constipation. In women each menstrual flow may bring on the pain, while pregnancy—in some instances at least—brings temporary relief. Sudden changes in weather, thunderstorms, a damp atmosphere, are sometimes given as exciting factors.

Many such patients can predict the coming of an attack. For a day or so they feel depressed, tired, less energetic, irritable and cross, while with others periods of euphoria have an equally ominous significance. I never feel more happy, more energetic and buoyant than on the day preceding an attack and have long ago learned to expect a day of suffering to follow these pleasurable sensations. Others are even less fortunate, for they are troubled by all sorts of disagreeable prodromal symptoms, such as chills, gastro-intestinal distress, indefinite fear, intermittent slight pains in the head. Occasionally, even before the patient himself is conscious of the coming of an attack, his facial expression may indicate fatigue; one eyelid may droop or, in rare cases, diplopia may develop. This is often followed by the abnormally sound sleep already referred to, and on the following morning the patient awakes with the headache.

Such a prodromal stage as has just been described is far from being a constant phenomenon. It may precede or be replaced by an aura, the latter most frequently affecting the sense of vision. Almost invariably it is only one-half of the visual field that is disturbed, at least at the beginning of the attack. It is hardly necessary here to describe the various phenomena that occur —the simple feeling as though a veil were being passed in front of the face, as though one-half of the visual field were black, the spots, sometimes luminous, then again dark, the showers of sparks, the zigzag lines, either black or else in all the colors of the rainbow. Transitory hemianopsia, central scotoma, concentric limitation of the field of vision, all have been observed, these latter usually affecting both eyes.

Of other symptoms of similar import, paresthesias, beginning in the periphery of one extremity and ascending toward the trunk, those in the arms often reaching the face, lips and tongue and then spreading to the opposite side of the head as well, deserve mention. They may sometimes be associated with hypesthesia or with weakness in the affected limb.

The various forms of aphasia have been seen, both of the motor and of the sensory type. One of my patients reported a brief but complete motor aphasia in the beginning of an attack. Sometimes confusion, vague fear or vertigo may occur, as do occasionally auditory or gustatory hallucinations of a very primitive character.

In many instances neither prodromi nor aura are present. The patient retires in the best of health, often has a night of unusually sound sleep—as was already stated —and awakes in the morning with the fully developed attack on him. Pain is, of course, the most prominent feature. It is usually unilateral, or at least more marked on the one side than on the other, more often on the left than on the right side of the head, and as a rule most intense around the region of the temple and the eye, but often extending along the frontal and occipital regions, as well as along the upper jaw. Attacks do not always affect the same side in the same individual. The character of the pain varies greatly, but it is perhaps most often throbbing. It is not intermittent, but remissions and exacerbations are frequent, either spontaneous in origin or due to external causes. All external stimuli may be painful; hyperesthesia to light, to sound, to odors is common. Valleix's points are frequently sensitive to pressure, as are other points along the head. A moderate degree of mental depression is common; somnolence and stupor are rarer phenomena. The affected side is often warmer to the touch than the other, and in that case the temporal arteries are prone to be more prominent, but abnormal local pallor may occur as well as alternating pallor and redness.

The action of the heart is not commonly altered, but occasionally bradycardia has been noted. The conjunctivæ are often injected; there may be lacrimation, and sometimes the distance between the two lids is lessened on the affected side. The latter symptom may perhaps have its origin in the existing photophobia, which leads to a partial closing of the eye. The pupils are often contracted, rarely dilated and often unequal, Moebius' statement to the contrary notwithstanding. Next to the pain and eye symptoms, gastro-intestinal disturbances are of greatest importance. In severe attacks it is usually impossible for the patients to take any nourishment at all, all such attempts leading to nausea and vomiting. Even a small quantity of water or the administration of drugs in any form by mouth may lead to this unpleasant result. But even independently of the ingestion of food, nausea is an almost constant symptom of an attack and it often leads to emesis, which may or may not terminate the seizure. Often we see diarrhea, either with or without colicky pains, and these again may or may not mean the end of the suffering. Obstinate constipation is, however, probably more often met, and in my own case at least there is very peculiar abdominal sensation, which I have also experienced in myself during an attack of ptomain poisoning. It is hard to describe and may perhaps best be characterized as a negative sensation, the absence of a sensation normally present, which I am inclined to attribute to the absence of the normal peristaltic movements. At such times my intestinal tract, ordinarily very sensitive to cathartics, fails to react to their administration.

In some instances, eructations, spasmodic sneezing, a profuse flow of tears, hyperidrosis, epistaxis or polyuria may terminate the attack. Mangelsdorf claims repeatedly to have seen a temporary dilatation of the stomach during the attack, which gradually lead to a permanent atony of the walls of that organ. Hemorrhages into the sclera or other parts of the eyeballs have been reported as rare occurrences.

Mantoux observed four tuberculous patients who had migraine, in whom the temperature would invariably drop with the onset of the headache, occasionally below the normal, as low as 96.8 per rectum. Both he and Steckel had seen a similar hypothermia in non-tuberculous individuals.

Russow found that the number of lymphocytes in the blood was increased in migrainous persons, slightly during the free interval only, markedly while the pain lasted. This increase seemed to bear a direct relationship to the frequency as well as to the intensity of the attacks.

Finally Gordon's paper on "Migrainic Psychosis" is deserving of brief mention. He reports 12 cases of transitory mental disturbances associated with megrim, of which several, however, are clearly epileptic, while two seem distinctly hysterical. The forms observed were: confusion, mild stupor with hallucinations, sometimes vague unsystematized delusions and delirium.

The attacks have an average duration of approximately twelve hours, varying, however, between a few minutes and several days. I have myself suffered from migraine for three days at a time. A patient seen very recently had daily mild attacks lasting only a few hours, and every two or four weeks a severe one, lasting all day. Sometimes they occur at regular intervals, as, for instance, in women with each menstrual period. In most cases the trouble appears in a mild form early in life, increases in intensity with adult age, the period of greatest stress, and then gradually moderates with advancing years. Occasionally a severe intercurrent illness seems to cause the megrim to disappear. Moebius mentions two cases in which tabes acted in this way. The menopause not infrequently brings an amelioration, sometimes a cessation, but it has been known to produce the opposite effect.

It has been asserted by some and denied by others that migraine may result in permanent hemiplegia, amaurosis, aphasia and epilepsy. The majority of such cases were undoubtedly instances of symptomatic rather than of idiopathic hemicrania.

Little can be said about the prognosis of the disease that has not already been given. The disease usually lasts the greater part of life, probably never terminates fatally, very rarely produces really grave results. Treatment rarely brings complete relief, but from my personal experience and that with my patients I should conclude that a marked improvement may often be obtained by a long-continued course of treatment. In my own case it has been possible to reduce the frequency of the attacks materially and to modify them so that they no longer incapacitate me from my work, and that at a time of life at which exactly the opposite development was to be expected. As a curiosity I wish to mention one patient, who for many years had been a sufferer from megrim as well as from exophthalmic goiter and who, when the latter disease had been very beneficially influenced by the serum of the thyroidectomized animal, ceased to have attacks of migraine.

Prophylactic treatment seems practically out of question. If we were to advise our migrainous clients not to marry, they would probably laugh at us, and, even if they did not, such advice would hardly seem justified. Where we have reason to suspect a predisposition for the disease, a simple mode of living, plenty of fresh air, a late beginning of school education, avoiding of excitement and mental exertion and—where a tendency to constipation exists—the administration of salines at regular intervals may be suggested. If we can influence the choice of occupation in such an individual, a vocation which will keep the patient out of doors should be counseled. Meat should be taken only in moderation, alcohol prohibited altogether, coffee and tobacco used only in small quantities and sexual excess avoided. A proper climate, preferably one that is dry, sometimes brings relief. Excessive mental work, excitement and anger, living in rooms with foul air, much "society," indiscretions in diet are to be shunned as much as possible.

Of drugs, the bromids have found enthusiastic advocates in Charcot and others. They recommend that the drug be continued for some time, perhaps with larger doses whenever there is any indication of a threatening attack. I have tried this treatment thoroughly and have had but very little success with it. The salicylates and the host of coal-tar anodynes are often useful and may sometimes abort an attack. Salipyrin especially has given me satisfactory results in a number of instances. Gowers recommends nitroglycerin in those cases in which the face turns pale. My personal experience does not justify me in expressing an opinion as to its value. Cannabis indica often is helpful in an attack. It is hardly necessary to state that the opiates should never be used if there is any other method of procuring relief. Hydrotherapy, massage, gymnastics, electricity are all of them useful in improving the patient's general health, the most important thing in the treatment of this malady. Gentle massage of the painful area often decreases the suffering. That an existing tendency to constipation requires careful attention need hardly be empha-

sized. During the attack a cup of strong coffee, the application of menthol to the temple, a mustard plaster to the back of the neck, an ice-bag to the head, may be soothing. Oppenheim claims marked improvement in many cases from the administration of arsenic, in some even a cure. Moebius mentions the curious fact that in some of the milder cases mental effort brings relief. I can confirm this statement from personal experience. The reading of a novel will not do it, but the study of an involved problem, one that requires the closest attention, often stops the pain with me.

What is migraine? A neurosis, say the text-books. That, translated into plain English, simply means that we know nothing of its pathology. The old theory of the sympathetic nerve origin has long since been dropped by most physicians, and it appears more than probable that the brain is the seat of the disease. That is as far as our knowledge goes. The rest is theory. That in these days it could not escape the fate of all mysterious diseases, that of being considered the result of auto-intoxication, is a matter of course. Those who hold this belief cannot prove it; those who do not share it cannot disprove it. There is no denying, however, that strong arguments can be advanced in its support. With a brief reference to the view that megrim is a manifestation of epilepsy I shall conclude these remarks. While in some details a superficial resemblance may be traced, in all essential and important features the two diseases seem to bear but a scant resemblance.

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THE DIAGNOSIS AND TREATMENT OF AMEBIC ULCERATION OF THE LARGE INTESTINE *

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I have chosen the designation "amebic ulceration of the large intestine" instead of the customary "amebic dysentery" in order to emphasize several points which seem to me of vital importance to a profitable study of the subject:

1. The essential feature of the disease process is always ulceration. Inflammation of the mucosa, more or less general, loose stools, mucous and bloody discharges, etc., are usually present, but they are properly to be regarded as incidental or secondary and in no sense distinctive.

2. The characteristic lesions of the disease are always found in the large bowel. The consensus of opinion is that the primary site of invasion is the cecum, whence the infection is carried by natural forces throughout the colon and rectum. Involvement of the distal portion of the ileum is occasionally mentioned in autopsy reports, but clinically this possibility may be, and usually is, ignored.

3. In the majority of cases there are no constitutional symptoms except such as may properly be considered secondary to derangement of the bowel function. Impairment of the general health is a sequel, not an inherent part of the pathologic process.

The disease is, therefore, to be regarded as a local, not a general, systemic disease, and may be tersely defined as a chronic ulcerative affection of the large bowel due to the local action of the *Ameba coli* (*Entameba histolytica*, Schaudinn).

* Read before the Section on Medicine of the Southern Medical Association, New Orleans, Nov. 9-11, 1909.

It is more than unfortunate that the term "dysentery" should ever have been applied to this affection, for the reason that it so often leads to confusion and error with respect to the therapeutic management. In the traditional teachings as to the treatment of dysentery, whether acute or chronic, medication by the mouth was uniformly emphasized as all-important and all-sufficient; and, in spite of our present-day enlightenment on the subject, the profession seems strangely reluctant to abandon the old fallacy. The very name "dysentery" still, with lamentable frequency, suggests a therapeutic routine which begins with calomel and the salines, includes opiates, astringents and intestinal antiseptics, and ends with bismuth and ipecac. Often there is no other symptom than bloody discharges from the bowel on which to base the diagnosis, and sometimes, sad to relate, there is only the statement of the patient that he has "bloody flux." Happily the modern teaching on this point is clear and emphatic. It is now well understood that the passage of blood from the rectum may be due to a wide variety of causes in no way related to dysentery, and the necessity of a careful local examination in every case is coming to be recognized as a sacred obligation.

It would be interesting, did time permit, to discuss the various views advanced by pathologists as to the real etiologic factor in these cases. By some the primary causative relation of the amebas is variously disputed, the contention being that a sound normal mucosa is proof against invasion by the organism. This view is very probably correct, at least as regards the initial infection. But in the light of pathologic findings it cannot be gainsaid that the nature and chronicity as well as the gravity of the affection are determined by the protozoa.

DIAGNOSIS

The symptoms of amebic ulceration of the large bowel do not differ from those due to ulceration from other causes. Loose stools, discharges of mucus, pus and blood, tenesmus, abdominal distention, loss of appetite, strength and flesh, progressive anemia, etc., etc., are the phenomena common to all forms of ulceration of the large intestine, but characteristic of none. It remains, then, in every case to institute a thorough local examination both to determine the site and extent of the trouble and to differentiate its exact nature. As heretofore observed, the rectum and sigmoid are practically always involved and with the use of the perfectly simple modern methods of examination, the direct inspection of these parts presents no difficulties. If the lesions be of the amebic type, their appearance is so characteristic as to render them easy of recognition by anyone who has ever before examined a case. The ulcers are variable in size, number and location, irregular in shape, but showing a tendency to extend in the direction of the circular muscular fibers, and covered with white or dirty gray pellicles, the removal of which usually leaves bleeding surfaces. Except in old neglected cases the lesions do not extend deeper than the submucosa, but present undermined edges and not infrequently are connected by submucous tracts. The free margins and proximal surfaces of the rectal valves seem to be favorite sites of invasion.

But while the clinical picture is often—I may say generally—sufficient for a diagnosis, it is strongly advisable that the confirmatory evidence of the microscope be sought in every case. This involves no great outlay of time or trouble and requires no special laboratory train-

ing. It is only necessary that the slide be warmed to approximately body temperature and the cover-glass pressed well down on the specimen so as to spread it thinly and uniformly. When present, the amebas with their characteristic movements are always the most conspicuous objects in the field.

In order for the microscopic examination to be of any real value in the diagnosis, it is of great importance that the specimen be properly obtained. Neither mucus nor feces are reliable for this purpose. Amebas may be found in them, but their presence is more or less accidental and their absence without diagnostic significance. The only reliable method of obtaining a specimen is by curetting an ulcer under direct vision through the proctoscope, the scraping being transferred to a slide and handled exactly as though it were merely mucus. If the case be one of amebic infection the organisms will rarely fail to appear in such a specimen.

Another aid to diagnosis, but one of only corroborative value, is the leucocyte count. Leucocytosis is usually present and is closely proportionate to the degree of inflammation and the amount of tissue destruction. By this means some knowledge of the patient's power of resistance may be gained and so, in doubtful cases, assistance in settling on the best plan of treatment.

TREATMENT

The treatment of amebic ulceration may be considered under three heads: general, local and surgical.

General Treatment.—This includes (1) rest, (2) diet, (3) hygienic and sanitary measures, and (4) medication by the mouth.

1. Rest is always of great importance. Ordinarily, time will be saved by confining the patient strictly to bed until control of the disease has been established. This may require only a few days or several weeks, depending on the severity of the case, but treatment will be far more promptly effective than if the patient continues on his feet.

2. Diet is also a matter of importance. For a few days it may be well to restrict it to liquids given in small or moderate quantities at frequent intervals. I am convinced, however, that serious error is often committed in this connection. These patients usually come to us weak, emaciated and semistarved from their own efforts at dieting, and one of the urgent indications is to give them nourishment as soon and as rapidly as possible. This can generally be done even in severe cases much earlier than is customary by devoting due care and attention to the subject. In addition to the predigested foods, peptonized milk, junket, etc., it has been my observation that in the majority of cases thoroughly browned toast, juice expressed from fresh beef, and soft-boiled eggs are well borne. Fruits, sweets, and all but the simplest foods should be withheld.

3. As for hygienic and sanitary measures, the former refer to the patient himself, and include fresh air, sunshine, cheerful surroundings, etc. In obstinate cases a change of climate may be helpful through its effect on the general health. Sanitary measures refer more particularly to the protection of the patient's family and community. The nurse or attendant should be given explicit instructions as to destroying all discharges from the bowel, and also as to the proper cleansing of his hands after waiting on the patient. The infectious agent is probably, in the main, water-borne, and the danger of contaminating the water-supply should be fully explained to all concerned.

4. Medication by the mouth. Referring first to the so-called specific medication, holding, as I do, most firmly that this disease is purely a local affection of the large bowel, I cannot believe that ipecac or any other medicinal agents administered by the mouth will retain sufficient potency after traversing the twenty-odd feet of small intestine to exert a destructive effect on the amebas when these are finally encountered. If this principle were correct, it would seem that the practically unanimous verdict of authorities with reference to the inefficacy of the antiseptic treatment of typhoid fever would, to say the least, be inconsistent. I am aware that the ipecac treatment is lauded by many whose opinions are entitled to all respect. But it is to be remembered that they have not relied on the drug alone. On the contrary, their reports show that dietetic and hygienic measures as well as irrigations have been coincidently employed, and from my point of view these were in reality the effective agents. I would interpose no special objection to the use of ipecac; but I would strongly urge that, in the light of our present knowledge, dependence on it to the exclusion of other measures is both unwise and unwarranted.

Speaking generally, the administration of medicines by the mouth should be resorted to only in the presence of well-defined indications. The routine administration of any remedy is to be condemned. In the beginning and from time to time during the progress of the case benefit may be expected from a mild mercurial purge. Occasionally an opiate will be required, though extreme caution should be exercised on this point. Intestinal antiseptics sometimes seem to be of benefit, acting by inhibiting fermentation and preventing toxemia, rather than by any special germicidal effect on the offending organisms. Among the more reliable agents of this class, salicylate of bismuth, betanaphthol, thymol, resorcin and phenyl salicylate (salol) may be mentioned. The first-named in my experience has proved the most dependable.

Local Treatment.—Whatever difference of opinion may exist as to the efficacy of ipecac, there is a striking and complete unanimity with reference to the value of local treatment. There is, however, some disagreement as to the best methods and measures to employ. Basing what follows on personal experience, let us consider the local treatment under two heads: (1) topical applications and (2) irrigations.

1. Undoubtedly in the average case the greatest single factor contributing to the patient's discomfort is the tenesmus. This it is which, in spite of the pain, forces him to seek the commode at short intervals, only to obtain momentary relief by passing a small quantity of blood-stained mucus and pus. The result is that sleep is disturbed, food is refused because it excites peristalsis, and strength is rapidly exhausted. This state of affairs is as unnecessary as it is deplorable. Tenesmus is a rectal symptom, due in this disease to the ulceration and inflammation practically always to be found in this organ. Now, when we reflect that the rectum throughout is as accessible to sight and treatment as the pharynx, or, indeed, as any corresponding area on the surface of the body, the term "unnecessary" as applied to this symptom and its sequels is justified. Topical applications to the diseased parts act like magic. The proctoscope is carefully introduced, the mucosa gently cleansed, and each ulcer touched with a solution of silver nitrate, 60 to 120 grains to the ounce. Before withdrawing the instrument a general application of the same agent, 3 to 5 grains to the ounce, may be made by

means of the atomizer. The treatment should be repeated daily until the symptom is under control; thereafter according to indications. The ulcers heal with remarkable rapidity and the further management of the case is greatly simplified.

2. With the large majority of clinicians, irrigations constitute the main dependence of treatment. A wide diversity of opinion exists as to the most effective solution, one man advocating one kind, another another. Personally, I believe that the effectiveness of irrigations depends rather on the mechanical cleansing action of the solution than on any medicinal agent it may contain. And I believe also that failure to cure every patient by this method of treatment is due alone to inability to reach all infected portions of the bowel with the solution.

The intolerance of the rectum, due to the local inflammation and tenesmus, renders it impossible in many cases, even with the aid of posture, to force the fluid into the higher portions of the intestine. The only means by which this difficulty can be overcome is the introduction of the colon tube. In spite of emphatic claims to the contrary, this is a most difficult feat as ordinarily attempted, the tube curling on itself in the rectum, thus leading to a misapprehension as to the height it has reached. By placing the patient in the knee-chest or inverted posture and passing the six-inch proctoscope the manipulation is rendered both easy and accurate, the tube being introduced through the proctoscope well into the sigmoid and the latter then withdrawn. At first the irrigations should be used daily or twice a day, not less than half a gallon of the solution being carried into the bowel before any portion of it is allowed to return. Later, as the patient improves, every other day or twice a week will be often enough, but the treatment should not be entirely discontinued for some weeks at least after the cure seems complete.

The medicinal agents employed in the solutions include boric acid, quinin, ichthyol, common salt, hydrastis, formalin, etc. Cold water alone has some advocates. My preference is the formalin in boric-acid solution, beginning with 1 dram to the half-gallon and increasing the strength as tolerance is acquired.

G. S. Hanes[1] calls attention to the wonderful curative effect of ordinary coal-oil when used for irrigation, asserting that it is healing to the inflamed mucosa, destructive to the amebas and absolutely non-toxic in any amount.

In some cases it is not impossible to irrigate the colon completely with no other tube than the ordinary two-inch syringe nozzle, provided the rectum is first given careful attention and the proper posture of the patient is secured.

Surgical Treatment.—Resort to surgery in the management of this disease is warranted for one purpose only, namely, to provide a means for irrigating the entire large intestine when for any reason this is impossible per rectum and the infection is proved to exist at a higher level than can be reached from below. Obviously, then, it will be indicated in only a limited number of cases.

The operation of choice is appendicostomy, in which the appendix is utilized as a conduit for the irrigating solution. The technic of the operation is exceedingly simple, it can be very quickly performed, and is practically free from danger.

When by reason of anatomic abnormality or pathologic change the appendix is found to be unsuited for the purpose intended, resort may be had to cecostomy, which, though not so simple in technic, is neither difficult nor dangerous and answers every purpose.

The solutions for irrigating are the same as those mentioned for use per rectum. It is worthy of remark, however, that benefit apparently follows the use of plain water as promptly as the medicated solutions, seeming to prove that the effect depends rather on the mechanical action of the fluid than on its antiseptic action.

If I were asked to specify the indications for appendicostomy, I should name just two: (1) failure to relieve by non-surgical methods faithfully and intelligently carried out; (2) recurrence of the attacks at such frequent intervals as to demonstrate that certain foci of infection exist in higher portions of the intestine than can be reached by irrigations per rectum. But I should add an earnest plea that the operation be not reserved for moribund patients. Performed under proper conditions and by competent operators, it should give no larger mortality than the interval operation for appendicitis, which at the present time is practically *nil*. On the other hand, the disease itself is by no means free from danger to life, the single complication of amebic abscess of the liver and other organs causing a far higher mortality rate than that of appendicostomy.

Is appendicostomy a curative procedure? Obviously not *per se*. But that it offers a means—in certain cases the only available means—of cure is the positive verdict of many competent and credible observers. Of course, the irrigations should be kept up for a sufficient length of time to effect a cure—not less than six months or, better, twelve; and, of course, a cure following the operation does not preclude the possibility of a reinfection.

Jackson Building.

1. Hanes, Granville S.: Amebic Dysentery, THE JOURNAL A. M. A., June 19, 1909, liii, 1990.

THE EARLY HISTORY OF ABDOMINAL SURGERY IN AMERICA*

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The history of abdominal operations forms one of the most interesting chapters of surgery. It is not the purpose of this paper to write it in its entirety, since, treated in detail, it would fill a large volume. It is rather the desire to give a few pen-pictures, chiefly of a personal type, of the experiences of men whom I have known and to show, if I may, the earnest cooperation of a considerable group of America's most distinguished surgeons.

As it is still the custom in some parts of the south, speaking of events transpiring a generation ago, to group them chronologically as happening before or since the war, so we may wisely group the early data into the former period. America is justly credited with the initial step in this new departure of surgery and Ephraim McDowell of Kentucky is properly called the father of ovariotomy. Although this goes back to 1809, it teaches that the world then was not so very large, and the world of thought even smaller, since Dr. McDowell was a student in Edinburgh and carried with him to his then backwoods home the wise training which he received in what was, for a long time, the first center of European medical knowledge and education. In

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

this later day, when specialism thrives in the great centers of population, we often look in vain among the specialists to find the splendid all-around educated men who can compare favorably with the judicial-minded, self-centered, better type of country practitioners. Such was Dr. McDowell, who necessarily had to do his own thinking; and it is the universal verdict that he did it wisely and well. Such also were the distinguished coterie of his followers, some of whom I had the honor to count as my friends, although they were in their full maturity while I was yet a junior. Thus I knew and loved the Atlees, splendid specimens of manhood, of masterly intellect blended with a gracious sweetness and kindness as tender as that of a woman. Gilman Kimball of Lowell, Horatio R. Storer of Boston, and the immortal Marion Sims and Addison Emmet of New York were also among my early masters and life-long friends.

Washington L. Atlee was born in Lancaster, Pa., in 1808 and graduated from Jefferson Medical College in 1829. In an address to the alumni of that college Professor Gross described him when a student as tall, erect and handsome in person, neat in his appearance and possessed with an amount of industry, intelligence and ambition which foreshadowed his future success. Young as he was, he was constantly in search of new truths and devoted to his profession. In a pamphlet published by him entitled "Retrospect of the Struggles and Triumph of Ovariotomy in Philadelphia" he states:

> On the 29th of June, 1843, my brother performed ovariotomy. This was the first time that both ovaries were removed. Being associated with him in the case, I commenced studying the literature of the operation and soon realized the bold and important step taken thirty-four years before by McDowell, of Kentucky.

Dr. Atlee operated twice in 1844. The first case, that of a woman of 61 years, proved fatal; the second patient recovered. His third operation, the first case in Philadelphia, was performed in March, 1849. He says, however:

> On moving to Philadelphia I found I had roused up a hornet's nest. Ovariotomy was everywhere decried. It was denounced by the general profession, in the medical societies, in all the medical colleges and even by the majority of my own colleagues. I was misrepresented before the medical public and was pointed out as a dangerous man, even as a murderer. The opposition went so far that a celebrated professor, a popular teacher and a captivating writer, in his public lectures invoked the law to arrest me in the performance of this operation.

The name of Atlee stands without a rival in connection with uterine fibroids. His operations were so heroic that no one for a long time dared to imitate him.

He died in September, 1878.

Dr. John L. Atlee shared the honors with his brother. In the discussion of the better methods of treating the pedicle of ovarian tumors (American Medical Association, June, 1876) he advocated the use of the clamp when possible, stating:

> I have used the ligature; I have used the hot iron; I have used the needle through the pedicle and walls of the abdomen; I have employed every method of treating the pedicle except pocketing it, and I prefer the clamp. I think the advantage of the clamp consists chiefly in keeping dead tissues out of the abdominal cavity. It fixes the uterus in position. Owing to the relaxed abdominal wall it is not a drag on the pedicle.
>
> . . .
>
> I have now operated over 340 times; over 200 times with the clamp with 79 per cent. recoveries. . . .
>
> Dr. Sims objects to the clamp, since it may produce a sloughing of the pedicle and give rise to septicemia; this I have never seen. The pedicle recedes and the wound heals by granulation.

Dr. A. Dunlap of Ohio, a man whom, for his many excellent qualities, I learned to love, and a great admirer of Dr. McDowell, took exception to the use of the clamp, preferring small silk ligatures. He said:

> The majority of the patients I have operated on would not have borne to have had the clamp applied putting the pedicle on stretch, since that would have endangered the patient on account of inflammatory action.

He states that he has had 80 per cent. of recoveries with which he has not been satisfied. He obscurely recognized infection and stated that some of his most favorable-looking cases were fatal, but not because of disturbance of the peritoneum. He used drainage-tubes in his most serious cases. He pointed out the increased mortality in patients operated on in large general hospitals and advocated careful exclusion in private wards. He gave the following reason for his objection to the drainage-tube:

> The air will pass into the cavity of the peritoneum as readily as the fluid will pass out. Every motion of the diaphragm and abdominal muscles acts like a suction-pump and will draw air into the cavity of the peritoneum alternately with the outflow of the fluid. Blood and bloody serum which without the contact with air might have been safely absorbed, will be more likely to putrefy and thus increase the danger to the patient. In cases, however, in which it has already occurred, the insertion of a drainage-tube is useful in aiding the discharge of the pus and putrescent fluids.

Closely associated with ovariotomy is hysterectomy for the removal of large uterine myomata. Mr. Charles Clay of Manchester, England, is accredited with the first operation deliberately undertaken for this purpose. The patient died two hours afterward from hemorrhage. This was in August, 1843. In November of the same year Mr. Heath operated, the patient's death, attributed to shock, probably from hemorrhage, taking place seventeen hours afterward. The cause of death in both cases was considered to be the division of the pedicle by the knife rather than by écraseur. Mr. Clay's second case was in January, 1844. Death, caused by the nurse letting the patient fall on the floor, took place thirteen days after the operation. The first successful case was that of a patient of Dr. L. P. Burnham of Lowell, Mass., operated on in June, 1853. After describing the operation in detail, Dr. Burnham said:

> I then passed a strong double ligature through the neck of the uterus and tied on each side; then, to make doubly sure against hemorrhage, a ligature was placed around the whole neck. No hemorrhage followed. After the removal of the uterus an examination of both ovaries revealed a diseased condition and they were accordingly extirpated. The abdominal cavity was then carefully sponged and all blood clots removed.

The wound was treated with cold water dressings. Severe inflammation followed with free suppuration. The last ligature came away the fifth week. In all, Dr. Burnham performed fifteen hysterectomies for fibroid tumors with three recoveries. One death was due to hemorrhage. In the light of modern knowledge death in the other cases was due probably to infection.

Dr. E. R. Peasley of New York operated in 1853, death occurring on the eighth day from intestinal obstruction—the intestine protruding between the abdominal sutures.

More than passing notice is due one of my first teachers, Dr. Horatio R. Storer of Boston. Personally I am under a debt of gratitude to Dr. Storer which can never be paid. We loved him despite, if not for, the enemies that he made. His equally distinguished father had

carefully supervised his education. A graduate of Harvard, a student at law, in due course a doctor of medicine and for four years a sharer in the home and training of the immortal Simpson of Edinburgh. As a labor of love for such instruction, he and the late Dr. Priestley of London edited the works of Dr. Simpson in two volumes. Dr. Storer returned to Boston and was appointed an instructor on the diseases of women in the Harvard Medical School. He had a most enthusiastic following when, as an undergraduate, I first met him. He soon became one of the most popular practitioners in the city of Boston and was said to have had the largest income of any member of the profession in New England. He was indefatigable in his work. He founded the Gynecological Society of Boston, the first special society devoted to the diseases of women in the world; and for seven years he published the *Journal of the Gynecological Society of Boston*. The first successful case on record undertaken for the cure of umbilical hernia was one of his early operations. In September, 1865, he successfully performed hysterectomy; and this was the twenty-fourth case of the operation placed on record and the fourth successful case operated on in America. In 1866 Dr. Storer contributed an elaborate paper on the treatment of the pedicle of fibroid tumors and strongly advocated the use of the clamp. He devised an instrument which he called his clamp-shield, an instrument capable of producing enormous compression and hinged on a pivot rotating so as to allow closure at any angle. I consider it the best, as well as last contribution for the external treatment of the pedicle by compression.

Dr. Storer made a further contribution, and in my judgment a more valuable one, which he called "pocketing the pedicle." Briefly, it was to suture the stump of the pedicle through and through with the deeper layer of the abdominal wall and thus keep under easy inspection the divided parts. By it he was enabled, in the non-infected cases, to close off the abdominal wall and protect the peritoneal cavity. This was, of course, a step in the direction of aseptic surgery, although taken blindly. There is no doubt that Dr. Storer was the "best-hated" member of the profession in Massachusetts. A long and dangerous illness removed him from the active arena and years were spent in Europe in quest of health, unfortunately never restored fully. He gave brilliant promise of being the leader of gynecology in America, notwithstanding the vituperative abuse unsparingly showered on him by men who should have known better. A generous share of this attention was bestowed on me as his ardent defender. I have somewhere a letter of his, written at the time, containing a touching appeal to forget him and his service to suffering humanity lest it work my ruin. He is a man of strong magnetic power, quick of thought and action, fluent of speech, equally ready to attack his enemies and to defend himself; and there are yet many who hold his service in grateful remembrance.

Dr. Gilman Kimball of Lowell, Mass., continued active until late in life. I saw him operate a number of times when past 70 with his usual skill and ability. I attended him in his last illness; he died when past 80 of hemorrhage from the stomach. He was a man to command attention in any assembly, although modest in the extreme. His abdominal operations totaled about 300. He removed the uterus in fourteen cases with six recoveries.

One of the earliest hysterectomies under the antiseptic method which I find recorded was by Dr. T. G. Thomas of New York, who used his clamp and passed four knitting-needles at right angles through the pedicle to prevent slipping. Although Dr. Thomas called this the antiseptic method, in his report of the case, it may be questioned if infection did not follow, since he states that "the portion of the uterus in and below the clamp entirely sloughed out; the cavity which was left healing by granulations, so that no trace of the organ remained."

About this period Dr. Thomas invited me to New York to see him remove an abdominal tumor and pass judgment on his technic. The tumor proved to be a large multiple cystoma without adhesions and the operation, simple as it was, should have been a brilliant one. All the paraphernalia of the time was in requisition. Two large steam atomizers played constantly on the field of operation. The room was very hot and close. The small pedicle was ligated and dropped within the abdominal cavity. All went to the seeming approval of the select group of distinguished guests. Coming from the operation, Dr. Thomas asked my criticism of the operation, to which I replied asking if he sought compliment or the detection of faulty technic. He answered he hoped the latter. Then I called his attention to the fact that he had taken an unsterilized towel and wiped the perspiration from his face and hands during the operation. The patient died on the third day from infection; and Dr. Cleveland, his then assistant, told me that special preparations had been made in order to show me a faultless technic.

Of the distinguished men who founded the Woman's Hospital of New York and who laid the foundation for abdominal surgery Sims, Emmet and Thomas stand out in bold relief. No men in America have had such splendid following. Sims was the magnetic, dashing Southern leader. Thomas and Emmet were his distinguished lieutenants, equally honored and beloved. The work of such masters is stamped with immortality.

Even the devastating war, which, directly or indirectly, brought death, calamity and sorrow into every household of our great country, had a fruitage of good. One of these benefits was the resultant better training of the younger generation of medical men in the field and camp. Many of the young army surgeons saw more clearly the need of higher education in their profession and were led to seek postgraduate training, then to be obtained almost exclusively in Europe. The surgical history of the Civil War was written by Dr. George A. Otis, formerly of Springfield, Mass., in a work perhaps unequaled by any American contributor to our literature. It is a mine of information which may be worked advantageously by any seeker of surgical knowledge; and I commend its careful study to those who would be masters of our art. I had the good fortune to begin my study of medicine with Dr. Otis as my preceptor and again to meet him when we were both surgeons in the Union army. He was a Virginian by birth. I sought his instruction on the recommendation of one of the first practitioners, who stated that Dr. Otis was probably the best educated physician in western Massachusetts. He had for a long time been a special student in Paris; for six years a medical editor in Richmond, Va., and later made Springfield, Mass., his home. He was a devout Catholic, fond of music and leader of the choir in his great church and an earnest union man. As a man of wealth he lived generously, his fine estate being nearly opposite the great Springfield arsenal. He appreciated the political situation far more accurately than most men of the north; and when, under the direction of Secretary Floyd, the arsenal was depleted of

its hundred thousand modern rifles to stock the storehouses in the southern states, he pointed one day to the long line of teams with their precious freight and said to me, "You men of the North have little conception of the volcano over which you are living." He remained in the service of the United States until near his death, which occurred in Washington. I think he was never quite so happy as when preparing some interesting specimen; and our army museum is the monument of his skill and industry. His voice was soft and pleasing; his southern accent modified by his long Parisian training. He was small in stature, quick in action, and at once impressed himself on those about him as a leader. He collected the records of 3,717 cases of penetrating wounds of the abdomen during the war of the rebellion and gives the ratio of mortality at 87.2 per cent. In 2,559 cases in which visceral injury had taken place 92.9 per cent. died.

In the *Transactions of the American Medical Association* for 1881 my late and beloved friend, Dr. Hunter McGuire, another distinguished Virginian, discussed gun-shot wounds of the peritoneum. He pertinently inquires:

Why are all penetrating wounds of the abdomen, with or without visceral injury, so fatal? Why, when the patient has escaped shock, exhaustion and hemorrhage should peritonitis kill within forty-eight hours? I believe the mortality is often due to some kind of blood poisoning connected with peritonitis just as often we see septicemia associated with peritonitis under other circumstances, notably after parturition and ovariotomy.

He said:

The wound in the abdominal wall should be enlarged or the linea alba opened sufficiently so that the injured parts could be thoroughly examined. Hemorrhage should be arrested. If intestinal wounds exist, they should be closed with animal sutures, first trimming their edges if lacerated and ragged. Blood and all extraneous matter should be carefully removed and then provision made for drainage.

He stated that these were the measures which he advocated in November, 1873, before the Virginia Medical Society. It must be recalled that at that date few accepted Mr. Lister's then novel views of infection, and it remained for Parks and Senn to enlarge on his teachings and engraft the new discovery on Dr. McGuire's urgent advocacy of peritoneal drainage. These three men were active co-workers until so recent a period that they are known to most of our present members. Perhaps less is known, however, of Dr. McGuire, who was a representative of the best type of Virginian. He was the medical director on the staff of General Stonewall Jackson and amputated his arm soon after the battle in which he was wounded. Four days later he died; his death being attributed to pneumonia due to the free use of cold water, but Dr. McGuire later told me that, interpreted in the light of modern knowledge, it was undoubtedly due to wound-infection.

Following the Civil War I was for some years an assistant at the Harvard Medical School and gladly sought the opportunity for further instruction by spending 1869 and 1870 in Europe, for the most part in Berlin. I was well trained in anatomy and I thought I knew surgery. Besides I spent a considerable portion of my time as a pupil of the immortal Virchow in the study of pathology. I first met Dr. J. Marion Sims in Paris only a little before the outbreak of the Franco-German war, in which he distinguished himself by inaugurating in the French army the American ambulance service as it had been developed during our Civil War. Ardent in his southern temperament, he determined that he would not live under the flag of our union. On this account he voluntarily expatriated himself and when abroad wrote his little volume on gynecology which almost at once gave him fame through Europe. Although not the first to operate for biliary obstruction, he was the first American to do the operation which was performed abroad, and, although he never repeated it, he elaborated and published the details of the technic much as used to-day.

In London I was the student of Paget, Ericson and Sir Spencer Wells with much profit. Mr. Paget asked me one day if I was familiar with the administration of ether, saying that he had heard much of its use in Boston, and, if so, he would like to have me etherize a patient for him. He stated that there had recently been six deaths from chloroform in the public service of London, and that he sought a safer anesthetic. I was introduced by him to the several hundred students occupying the amphitheater, while a small, nervous woman was brought in for operation. By good fortune the patient was soon asleep without a struggle, and Mr. Paget stated that, in so far as he knew, it was the first time that ether had been used as an anesthetic in London.

Only a very little later Sir James Simpson, who first used chloroform in surgery and stoutly declared that the only danger from its administration lay in the incompetency of the anesthetizer, had a patient die on the table before the operation was begun. Although a man of enormous physical vigor, he had greatly overtaxed himself and in his weakened condition the shock resulting from this death caused him to take to his bed and four days later he died from angina pectoris. The surgical profession of all Europe mourned his loss as that of a brother, and when, soon after, I visited his grave, the worn turf for a considerable space about his burial-place gave evidence of the crowds of both rich and poor who had sought to honor his memory.

Through the kindness of Dr. Storer it had been arranged that I should spend the summer under this great man. In the fulfilment of my plan I determined to remain in Edinburgh and thought to profit under another of Scotland's great teachers, Professor Syme. Sadly a few days later I attended his funeral. Chief among the mourners a medium-sized man, accompanied by a tall lady, was pointed out to me. It was Mr. Joseph Lister, who had married Professor Syme's daughter and through his influence had come to Edinburgh to be his successor in practice. My informant, a young local physician, said he was full of strange notions and that nobody in Edinburgh wanted him.

A few days later I presented my card and was received most cordially. I shall never forget the morning. His beds were on the first floor of the old infirmary, which was none too clean or attractive. He showed me a number of his patients; among others two or three with resections of the elbow-joint. The little patients were almost without pain or suffering, with only a moderate amount of serous discharge. Convinced by what I saw before the morning ended, I asked to be his special student for the summer; and day by day I learned more and more to admire and wonder at the miracles of modern surgery that I saw. I had heard much of Scotch character and had witnessed what I had deemed the extreme of ill temper exhibited by members of the profession in Boston, but that to which Lister was subjected exceeded all. Men well known in the world of science passed and repassed Mr. Lister in

their rounds of daily duty without a nod of recognition, and this was by no means the limit of disapproval shown.

As Virchow in the former year had supervised the selection of my pathologic equipment, so Mr. Lister kindly aided me in obtaining a generous supply of his surgical material. The large rolls of his carbolic-lac-plaster puzzled our revenue officers in determining under what schedule they should be rated for duty. I was the first American pupil of the then almost unknown Mr. Lister, but in the enthusiasm of youth I thought it an easy matter to convert my brethren, forgetting for the moment that the master himself was the target of the most bitter criticism and that his methods were decried as unscientific and absurd. When I sought to make a practical demonstration in the hospitals of Boston I was frigidly told that when my services were desired I should be notified. Stung to the quick by the cool, bitter criticisms of many whom I had considered friends in the profession, refused a hearing on the subject before the medical societies, I, unwisely, as I now think, refused a professorship in Chicago and determined that Boston should yet recognize the value of the teachings of my master and honor me as his pupil. I opened a private hospital and, regardless of fee, welcomed whoever would come to me. Of course, little by little the results of my operative procedures became known. In a complacent way it was stated that I was lucky and later that I picked my cases. In 1876 I received a royal welcome in the American Medical Association when my beloved Dr. Sims was president.

I established a laboratory for bacteriologic and pathologic research, having the good fortune to secure the able assistance of the late Dr. A. P. Holt and Dr. Samuel Nelson of Cambridge, Mass. This work was continued fifteen years, the chief problem under consideration being the rôle of bacteria in their relation to surgery, then called surgical pathology. The tender sensibilities of women of doubtful age caused complaint of our work and the society of the long name became actively interested in our little colonies of rabbits and guinea-pigs kept in my large garden for experimental research. Thus from year to year, besides communications to many of the journals, I brought the fruitage of our work to the American Medical Association, until now each year since 1876 I have been in unbroken attendance and yearly have contributed the results of my studies. I am sorry to confess that the new teaching made slow progress in its acceptance, and not until after it had met German approval did the leading surgeons of Boston consider favorably its adoption.

I offer this brief chapter of personal history, since, in a way said to be peculiar to Boston, it is now claimed for one of its leading hospitals that antiseptic surgery was there first practiced and its methods introduced by its surgeons into America. Although such experiences are intensely bitter, they may be welcomed, since the better qualities and the higher attainment are the fruitage. At about this period Dr. Sternberg began his bacteriologic research work, and for years we were the pioneers in this field of knowledge so revolutionary in its practical teaching. We first knew each other through our publications. His wise superiors at Washington thought that this young medical officer was wasting his time in such foolish study and he was ordered to service upon an island in the Pacific. Replying to a letter of indignation on my part advising his resignation, he wrote, "Such experiences make the discipline of life. It is a long road that has no turn." The bestowal of the first honors that the government can confer on a medical officer shows that he was far wiser than I, although in a measure I tried to profit by his philosophic advice.

Little by little the unknown factors of the problem of infection and how to avoid it were slowly mastered, until now we look in wonderment on the revolutionary results of its teaching. Although general surgery has profited as never before, the battle royal of aseptic surgery was fought and won within the realm of the abdominal cavity. It would be almost invidious to single out from the considerable army of modern contributors the names of men still living and comparatively young to whom our great profession owe a debt of gratitude. A coming generation will do them ample honor. As the fruitage of my own work in research, there came almost by inference certain practical deductions.

Although in other publications I have shown that the buried animal ligature is justly accredited to an early generation of American surgeons, its modern use and the reasons of its safe application are the triumph of Lister's genius, who knew nothing of this work so well done by Dr. Jamieson, whose experimental demonstrations were published in 1827. In the days of my pupilage with Mr. Lister, although he ligated arteries with seeming impunity, cutting short the catgut ligature and closing the wound aseptically, it had never occurred to him to bury sutures. He often called our attention to the interrupted stitch taken through and through, showing that active proliferation under aseptic conditions was not provocative of pus, but that the most active cell change took place in the deeper layer of the skin, where, if permitted to remain sufficiently long, the suture material separated, leaving the deeper portion to be absorbed. To me it seemed a simple corollary that the entire stitch could be buried and that like parts in well-vitalized tissues could be rejoined.

The first practical outcome of this reasoning was in 1870 in the cure of hernia, the cases being published in 1871. The keynote of the reasoning, the reconstruction of the parts to their normal anatomic condition, simple as it seemed, has proved the solution of the "thousand-year-old problem of surgery" and is in daily practice in all parts of the civilized world. It followed that every variety of hernia could be easily and simply cured. The causes of ventral hernia after operative interference were easily shown to be a maladjustment of the like structures of the abdominal wall, necessarily incident to the joining of the parts by the through-and-through interrupted stitch. This was easily obviated by the careful reunion of like structures by layers of continuous absorbable sutures. Such was the outcome that in the last 2,000 cases of laparotomy with primary union, in which the sundered structures were rejoined in layers with buried kangaroo tendon continuous sutures, I am not aware of a single case of hernia following operation.

The greater victories, however, have been won within the abdominal cavity. Very naturally the largest factor of success in the treatment of pathologic conditions here found result in an earlier recognition and surgical intervention. Ovarian and uterine tumors are rarely permitted to develop into the conditions in which they were commonly found by the earlier operators: a most important factor when comparing the statistical tables that is often overlooked. Tumors without adhesions leave the peritoneum as a rule uninjured. The intestines are disturbed only by displacement. Modern technic permits an easy inspection of the pelvic cavity and

bleeding vessels are readily secured. The vexed question of the pedicle, so long a stumbling-block to our fathers, is easily solved. It early appeared to me to be very important to cover in, so far as possible, all excised and denuded surfaces with healthy peritoneum, first the pedicle of the ovarian growth; and in 1880 I first put in practice the infraperitoneal treatment of the cervical pedicle in the removal of myomatous growths.

"In 1880, assisted by my distinguished teacher, Dr. Gilman Kimball, of Lowell, I removed the uterus for the first time, for a large multiple myoma, where I adopted a modification of Schroeder's method, embodying all that is at present considered essential. Commencing on one side, I sutured the broad ligament with a double continuous tendon suture, extended so as to include the cervix. The broad ligaments were divided, the peritoneum reflected from either side, the stump cut down conically and covered over by an infrafolding of the peritoneum with a continuous sero-serous animal suture. The suture thus taken intrafolded the peritoneum evenly, while it was itself buried beneath it, leaving no line of infraction of the pelvic peritoneum. Thus the stump, dropped within the abdomen, was itself extraperitoneal. This method seemed to me so important an improvement on that of Schroeder that I reported it in a paper read at the International Medical Congress[1] held in London in 1881. I incorporated it in further detail in my address on "Fibroid Tumors of the Uterus" as president of the Section on Obstetrics and Diseases of Women of the American Medical Association in 1882. In 1887 I reported still further my experiences with this method and emphasized its value. I also pointed out the importance of dealing with the larger number of uterine myomata, which developed in such a way as to have really no pedicle. My last special contribution upon this subject was a paper entitled "The Surgical Treatment of Non-Pedunculated Tumors," read at the American Medical Association in May, 1890. Up to that period, in common with nearly every other abdominal surgeon, I had considered hemorrhage the greatest of all dangers; and in order to lessen this, I devised and used the so-called rubber-dam, a thin sheet of rubber with a central reinforced opening which was stretched over the tumor and crowded down as far as possible to the base, around which was placed a constricting rubber ligature. The suggestion of its use occurred to me from noting the admirable service rendered the dentist by the constricting rubber placed around the root of a carious tooth. It served the double purpose of controlling hemorrhage and keeping the abdominal cavity entirely free from surgical contact. This was applicable, however, only to moveable tumors with a more or less distinct pedicle.

An aseptic operation thus carefully performed leaves a comparatively uninjured peritoneal cavity without points for subsequent adhesion, and convalescence speedily follows on the restoration of intestinal function.

The removal of the appendix, now a daily operation, is practically without danger when the operation is performed before the appendix ruptures and peritonitis sets in. In my entire series of several hundred cases I have not seen a patient seemingly approach the danger-line. It happens that I was the first operator in the world to remove the appendix in the so-called periods between the attacks. The credit of this interference was due to the insistence of the patient, a wise physician, who had concluded that this was the period of special safety. So important was the operation considered then that a number of leading surgeons came over from New York to witness it. This was in November, 1886.

The surgery of the biliary tract is so recent that it requires only reference. In 1880 Lawson Tait enthusiastically told me of his long series of operations, then numbering nearly forty. I have already referred to the case of Dr. Sims, and most know that Dr. Dobs of Indiana was the first surgeon in the world to operate successfully on the gall bladder. This was due, however, to accident rather than design, since the gall bladder was so distended with fluid that it was believed to be an ovarian cyst. I happen to be the first surgeon in America to operate successfully for biliary obstruction, the patient being a physician, aged about 70. This was in July, 1887. In October, 1889, I removed a gall-stone from the common bile duct (the patient visited me only recently), and this proved to be the first patient operated on in the world for the removal of a stone lodged in the common duct. Now these operations, only so little ago declared by the leading authorities beyond the realm of surgery, are of such frequent occurrence that they cause little comment. Operation on the intestinal tract, on the kidney, on the bladder within the abdominal cavity, and even on the spleen and liver are by no means of rare occurrence.

The drainage of wounds, so long considered absolutely necessary, is the decided exception and should be almost never resorted to in aseptic conditions.

Thus closes a brief summary of the most brilliant achievements of modern surgery; and the contribution of the most important factors has been the work of American surgeons. There is good reason for believing that this was due in large degree to the openmindedness of her students. In the early part of this generation Germany claimed the rôle of honor in her teaching and would learn little from Great Britain and less from France. Great Britain, smarting under the loss of her recent prestige, refused to accept the teaching of either Germany or France; and France, in turn, which had claimed the banner for a century, would profit nothing from Germany or England. The American student without prejudice sought profit from all and earned the award so generously given by Virchow in his introductory address as President of the International Medical Congress in Berlin in 1890 when he said "America leads the world in surgery."

180 Commonwealth Avenue.

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LUETIC LYMPHOMA IN LATE SYPHILIS*

DOUGLASS W. MONTGOMERY, M.D.
AND
GEORGE D. CULVER, M.D.
SAN FRANCISCO

Gigantic steadily advancing enlargement of the lymphatic nodules in the neck of an otherwise healthy adult, not accounted for by any pyogenic or epitheliomatous focus in the tonsils or elsewhere, leads one almost inevitably to the diagnosis of lymphosarcoma, with the desperate alternative of an almost hopeless operation. In such an enlargement, tuberculosis also must be considered. Some of these cases are, however, due to syphilis and are amenable to vigorous antisyphilitic treatment, of which the following is an instance:

* Read before the California Academy of Medicine, Nov. 23, 1909.

Patient.—On Jan. 6, 1909, a man, aged 36, came into the office presenting a marked swelling in the right side of the neck. His family history was negative. He had acquired a venereal sore in 1902 which cleared up, as he remembered, without other symptoms. For the past four years he had had numerous boils and carbuncles on the back of the neck.

Examination.—The patient was a large man, in robust health, and said, as he came in, that he was suffering from the effect of boils, and that he had a swelled neck. There was indeed a large swelling of the right side of the neck that bulged out over the collar. The greater part of this swelling was along the posterior border of the right sternomastoid muscle. The hollows under the ear and back of the neck were obliterated, and the skin was tense. On removing the collar the swelling seemed to fill the whole of the right side of the neck. The entire mass was firm, and at its posterior border there was an extension of the induration that was so hard as to feel woody. There was a distinct impression of tense fluctuation in the central portion of the main mass, and the skin overlying this was congested. An area larger than the mass was completely denuded of hair, owing to previous treatment with *x*-rays. There was an almond-sized, hard lymphatic nodule in the right side of the suprasternal notch, and a number of smaller palpable hard nodules in both the right anterior and posterior cervical chains. The patient felt fulness in the neck, with a consciousness of some discomfort deep within the throat.

Diagnosis.—The first disease thought of was lymphosarcoma, as the affection appeared in a classic situation for this tumor, and evidently was extending rapidly downward along the lymphatic chain. The decided hardness of one of the tumors, and the lack of mobility in this one, and also in the main mass, strengthened this impression. Pyogenic processes in the mouth or tonsils would not produce such large tumors, and, besides, the posterior chain of glands would not be involved to such an extent. The patient did not give at all the impression of being either scrofulous or tuberculous, and the process was too rapid for either. There was no enlargement of the liver or of the attainable lymphatic nodules of other regions of the body, and the blood had been carefully examined previous to his coming to us with negative findings, so that the enlargement was evidently not due to leukemia. The facts that the man gave practically a negative history of lues, and that his memory was not made keener by the suggestion of the necessity of an extensive operation, were not considered strong enough to exclude the possibility of a former spirochetal infection. A test for a Wassermann reaction was not made. A positive complement fixation might have been of some assistance. The diagnosis therefore narrowed down to either late enlargement of the lymph nodes in syphilis or to lymphosarcoma, with the great probability of its being the latter.

Treatment.—The very bad prognosis incident to operative procedures in such cases induced us, however, even at the risk of losing time, to try first a vigorous antisyphilitic treatment. The patient was given the neutral salicylate of mercury, 10 per cent. solution in petrolatum liquidum by intramuscular injection into the buttocks. A dose of seventeen minims of the solution was injected the first day, and twenty minims thereafter at intervals of eight days. Ten such injections were given. Potassium iodid in ten-drop doses of the saturated solution was ordered three times a day at the beginning, increased to fifteen drops on January 8, and to twenty drops on January 14, and continued at that from then on. Three days after the injection the swelling in the neck felt softer. On January 14 the enlargement was much reduced. On January 22 there was still greater reduction, and there was a more natural sensation on palpation. There was a constant decrease in size and hardness up to March 12, when there was no enlargement by palpation, and no enlarged lymph-nodes were demonstrable. Compared with the left, the right side of the neck was but slightly more prominent. On April 26 the neck was apparently normal. The entire treatment lasted about ten weeks.

A later point in the history, and a most interesting feature of the case, came to our knowledge through an answer to a letter written to the dermatologist who had first treated the patient. He told us that the man did have a faint roseola following a sore in 1902, and was treated internally for a long time. He also said that he had been, as we were, much puzzled over the condition of the man's neck. The blood had been examined several times with negative findings. Mercury in pill form and iodids had been given for a while after the appearance of the glandular enlargement in the neck without much benefit. Interesting to relate, the use of the *x*-rays was followed by a reduction in the size of the glands. Later the patient took rather large doses of the syrup of the iodid of iron.

In a case of enlargement of the superficial lymphatic nodules, not dependent on recent syphilis or any of the acute fevers, we have to consider:

1. Actinomycosis.
2. Blastomycosis.
3. Granuloma coccidioides.
4. Leucemia.
5. Endothelioma.
6. Pyogenic infection.
7. Carcinoma.
8. Tuberculosis.
9. Lymphosarcoma (Hodgkin's disease).
10. Syphilis.

In regard to actinomycosis, blastomycosis and granuloma coccidioides, the difficulties in diagnosis would be greatly lessened by concomitant symptoms, and could be made positive by the microscope and by culture growths. The blood-picture, including an enlarged spleen, would assist in a diagnosis of leucemia. Endothelioma is generally undiagnosed without a microscopic section. It is a single tumor; it may fluctuate and have grumous contents. As to pyogenic infection, it is our experience that enlarged lymph-nodes due to such a cause are dependent on an active and not an attenuated virus, and are associated with some quite recent or concomitant focus. This last is particularly interesting in its bearing on the present case, as the man had had furuncles some months previously, and the possibility of his condition being due to the locking up of an attenuated virus in the lymph-glands of the neck was suggested by the dermatologist who formerly had charge of the patient.

Primary carcinoma of the lymph-glands is exceedingly rare, and most cases supposed to be of that character have proved to be endothelioma. Little difficulty would arise if a carcinoma which drained into the affected glands was present.

Consideration of the possibility of metastasis from more remote locations might be puzzling, however, as in an interesting case reported by Dr. H. Brouser,[1] in which hematuria occurred four years subsequent to a syphilitic infection. The hematuria lasted three weeks and recurred several times, lasting two or three days each time. Specific treatment had not influenced the condition. Two years later a cystoscopic examination showed a cherry-stone-sized papillomatous structure at the right ureteral opening, and recurrent hematuria was frequent. A year later the patient presented an oval, large, hen-egg-sized solid tumor at the posterior border of the right sternomastoid muscle, not sharply limited, and not so closely adherent at the base as to the skin. Fluctuation and redness were present, but other symptoms of inflammation were absent. Brouser stated that the appearance was in favor of a gumma, but the situation spoke more for a lymphosarcoma, and there was the possibility of its being a metastasis from the bladder condition. Specific treatment cleared up the swelling in a few weeks, and the bladder condition remained

1. Brouser, H.: Berl. klin. Wchnschr., Jan. 20, 1908.

unchanged until two years later when it cleared spontaneously.

As an illustration of the condition mimicking tuberculosis we have a case reported by Lacapère and Ravaud,[2] in which the symptoms seemed to indicate plainly that the enlargement was tuberculous. The patient's husband was tuberculous, and she herself had recently fallen away in flesh. Three years before, the patient had contracted syphilis, accompanied by the usual symptoms, and had been treated during an entire year with injections of soluble mercurial salts. Six months before, there had appeared a little tumor in the right submaxillary region, which was incised by her doctor, but had never healed; the fistula remaining even under specific treatment. Two months after this the right preauricular ganglion enlarged. That was incised, and became fungous and fistulous also. When the patient consulted Lacapère and Ravaud there was, in the latter region, three little ulcers from 3 to 4 mm. in diameter of unmistakable gummatous nature. The presence of the typical gummatous ulcerations allowed a positive diagnosis of syphilis, and, besides this, there was the history and the rapidity of evolution of the malady; and, furthermore, there was a subcutaneous gumma of the internal surface of the left arm. After three weeks' treatment with iodin and mercury the fungous fistulas were cicatrizing nicely and the gumma of the arm had diminished one-half.

More important than all the rest is the likeness these late enlarged lymph-nodes in syphilis have to lymphosarcoma, particularly when it is the only condition found, as in our own case.

In a case reported by one of us[3] in 1891, the mimicry of lymphosarcoma was characteristic, but not so striking as in the case that forms the subject of the present paper. The patient had had a sore ten years before. Five years later there were swellings in both sides of the neck, which disappeared in two weeks under antisyphilitic treatment. There were swellings in both armpits two years later, which were successfully treated in the same manner. He came for treatment because of swellings in the neck, which had started five months previously. All the tumors were freely movable, except a very large one on the left side of the neck extending down over the chest. All were firm. The only painful tumor was one above the right clavicle. There were some hyperemic patches on the skin. In no instance was the skin attached to the tumor beneath. Urine and blood were normal. There was no indication of enlargement of the deep glands either of the abdomen or thorax. The patient made a complete recovery under antisyphilitic treatment.

Here we may mention a case reported by Kreibich,[4] of great interest because of a mistake in the diagnosis. The patient, 36 years old, had partial ankylosis of many of the joints due to a gonorrheal infection. Although the patient was thin and weak, there was no cough and no family history of tuberculosis. The lymph glands of the left side of the neck began to enlarge and were removed. Later enlarged glands on the right side were removed, and a second operation on the left side was necessary because of a recurrence. Following this, other glands in the neck enlarged, with infiltration of the overlying skin, extending backward on the neck and upward on the cheek. The patient was then transferred from the surgical to the dermatologic clinic. Ulcers, characteristic of lues, had by this time appeared and a tendency to marked scar formation on spontaneous healing was observed. The whole skin of the left side of the neck was dark red, firmly thickened and bound down. The occurrence of the characteristic ulcers made the diagnosis less difficult. There was a history of a small sore on the penis fourteen years previously, which had healed in eight days under treatment. The ulcers healed, the infiltrations disappeared and the swelling of the lymph-glands receded rapidly under general and local mercurial treatment. The joint conditions due to the gonorrhea remained unchanged.

In a personal communication, Dr. Charles N. Dowd, of New York, states that he has seen many cases of enlarged lymph-nodes which were benefited by antisyphilitic treatment, and he believes that they are double infections, syphilis and tuberculosis, or syphilis in combination with one of the milder infections. He has not seen nodes greatly enlarged, which he believed to be of purely syphilitic origin.

But even viewing it in this light, one cannot conceive of any other infection clearing up as did our own case under the medication. If it had been, as was suggested, an attenuated pyogenic infection, it would have unavoidably broken down in the center of the large mass. No combination of infections can be imagined as marching along to complete resolution as did the tumors in this case. If syphilis and tuberculosis had been associated, the syphilis would have cleared up, and tuberculosis would have remained.

As to the rarity of the condition, a repetition of the statement made by Kreibich is to the point. Golod found it once in 573 cases. Fournier did not see it at all in 3,429 cases. Dr. Sigmund Lustgarten reported three similar cases in a most able article,[5] which thoroughly covers the literature up to 1890. He states that but 20 cases of glands affected in an isolated manner had been reported, the number including his own cases. He makes three divisions of luetic lymphomas:

1. Luetic lymphomas concomitant with or subsequent to other syphilitic lesions.

2. Luetic lymphomas with visceral affections in a predisposed individual subsequent to surgical or other traumas; or in glands which a previous disease has rendered less resistant.

3. Luetic lymphomas as a single manifestation of the disease.

The attitude to assume in a case of this kind would seem to us to be as follows: The possibility of syphilis must be considered and a Wassermann test carried out. To save any waste of time a vigorous course of antisyphilitic treatment should be immediately begun, preferably with inunctions carried out as strictly and with the same carefulness as an operative procedure in surgery; or with a course of injections of mercury, either of gray oil, or of an insoluble salt, such as the neutral salicylate of mercury. At the same time iodid of potash should be given, beginning with 10 grains three times a day and running up to 50 grains if necessary.

2. Lacapère and Ravaud: Bull. Soc. franç. de dermat. et de Syph., December, 1908, p. 332.
3. Montgomery, D. W.: Pacific Med. Jour., Feb. 18, 1891.
4. Kreibich, C.: Med. Klin., Dec. 29, 1907.

Psychoses in Pellagra.—S. Zsako has recently reported in the *Orvosi Hetilap* 27 cases of pellagra insanity among the inmates of the Klausenburg (Kolozsvar) asylum. He regards the prognosis of the pellagra psychosis as bad, the condition tending more and more to the manic-depressive type, accompanied by distressing hallucinations and dread with frequent paralyses. Klausenburg is in eastern Hungary, about as far north as Switzerland.

5. Lustgarten, S.: Ne wYork Med. Rec., Jan. 11, 1890

GENERAL THERAPEUTICS AND SURGERY IN DENTISTRY *

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The title of my paper is somewhat misleading, as it is my object to dwell on the sad fact that therapeutics, general medicine and surgery have hardly any place in dentistry as practiced to-day by the vast majority of dentists. It is my intention to make this paper the first of a series on the subject.

What are the duties of a dentist? Nothing short of the preservation where possible, otherwise the restoration, of the buccal cavity, with its teeth and adjacent tissues, to its highest degree of normal physiologic proficiency. This, of course, includes the care, when necessary, of the mouth and all that concerns it, prior to the eruption of the deciduous teeth, the care of the deciduous teeth and the pre-eruptive stages of the permanent set, together with the latter; it also calls for any manipulative or other interference—substitution and so on—required in order to obtain the above result. To accomplish this end, the ideal dentist should employ all possible agencies—mechanics, surgery, general medicine, therapeutics, materia medica—and should have a thorough knowledge of each.

It is agreed by all, I think, that the mechanical end of the profession of dentistry, which has been the prime factor in placing dentistry largely in the category of a trade, has been well cared for. Marvelous results have been reached in this sphere. As a mechanic the average dentist excels, but as a scientific student and follower of surgery and general medicine applicable to dentistry, he fails. Yet it is through knowledge of these important branches that he will do his best work, deserve and receive the due recognition from the community and enter into the enjoyment of the higher and more enviable social standing of the medical man. Neglect and ignorance of the great fields of surgery—general medicine, pathology and therapeutics—have been the great factors in branding the dentist a mechanic. Ignorance primarily on the part of the dentist of things medical and ignorance secondarily on the part of the medical man of things dental have much to answer for.

Much has been said and done of late years to rescue the dental profession from the hands of the mechanic, pure and simple, and to entrust it to its rightful guardian and more trustworthy follower, the scientific man, the stomatologist, orthodontist or oral surgeon; but much yet remains to be said and done before the calling will enjoy the proper and exalted position it should hold in the eyes of the community at large and the scientific world in particular. In this progressive age there is no such thing as standing still; it is either retrogression or progress, and we must ever be on the watch for the signs of either.

While the dentist does not enjoy the social recognition in England that he does in the United States, the scientific training of the English dentist does not fall short of that of his confrère in the United States. Yet it has been but recently a question in Parliament as to whether the dentist should be prohibited from administering anesthetics (Dr. W. Hewitt's bill). On this side we have postgraduate schools of anesthetics for dentists, be it said to the shame of our dental colleges. To quote Dr. E. Talbot, "dental teachers are decades behind the progress made in other directions in medicine"—is to put it mildly, I fear. The most important branches that should be the foundation-stones of our calling—pathology, physiology, surgery, anatomy, therapeutics and others—are shamefully slighted in our dental colleges in order to pamper to this commercial age by short-cut inducements to students. Along these lines were the bitterest fights between the best and worst elements at the faculty meetings of one of the most progressive dental schools in Pennsylvania of which I had the honor of being a member.

As long as the human race possesses teeth, so long will the mechanical aspect of the dental profession endure; but each year will bring fresh proof that much of this mechanical labor can be obviated by the proper use of the fruits of scientific research work in the fields of preventive and curative medicine and surgery.

What branch of medicine does not directly or indirectly concern the oral cavity? Against the many defects of the oral cavity, as cleft palate, protrusions, retractions, malocclusions and absence of teeth, the whole range of medicine is, in turn, called into play. The medical profession is not only being made to realize the extent and importance of the field of dentistry, but is being compelled to feel its ignorance of this unexplored region. Happy will be the day for the patient when the dentist knows what he should know about things medical and the medical man knows what he should know about things dental.

Many will say that as soon as dentists begin to prescribe general remedies or resort to surgical means the medical world will accuse them of trespassing. It is the fault of the dental profession that such impertinent interference has been and is tolerated, for we, its members, have been so ignorant of these medical fields that we have felt ourselves to be strangers, and as strangers in a strange land we have too often allowed ourselves to be turned away from our own. But our ignorance is, as I have already said before, equaled by the ignorance of the medical man of things and conditions dental.

The majority of the medical fraternity who take on themselves the burden of regulating the duties of the dental practitioner are, as a rule, men who would stumble at writing a prescription for a dose of castor-oil, and yet would criticize a humble dental practitioner for administering a diuretic, or any other drug, should he deem such necessary to regulate a condition manifesting itself in the mouth.

It is the gardener's duty to produce flowers and vegetables. Were we to confine his efforts to the flowers, leaves and branches, and forbid his touching the soil, we could not honestly expect him to get results; nor can we expect the dentist to do his best work in the dark shades of ignorance of everything but the mechanical side of his profession, his efforts being confined to the teeth and their roots. The rhinologist does not call in the services of the surgeon or medical man whenever he deems it necessary to operate on a deflected septum, nor does the laryngologist or the otologist require a special dispensation to give general or surgical aid to tuberculous or other conditions invading their fields of activity. Why should the dentist, alone of all specialists, be subject to such restrictions? Can it be that the mouth only calls for the services of a specialized plumber or "tooth carpenter," while the nose, ear, stomach or rectum must be attended to by the scientific, medical specialist?

Sir Frederick Treves asserts that "more care about the mouth means less care about the diet." Another

* Read in the Section on Stomatology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

noted writer states that "the great sanitary reform of the world is not the abolition of the tubercle bacillus, but lies in the stupendous task of revolutionizing the insanitary and infectious condition of the mouth." Still another writer says: "It is a well-known fact that dental treatment early in life prevents more disease in after-life than any other measure taken by governments, not even excepting vaccination."

What is more to be dreaded than a fulminant septicemia or attack of meningitis caused by an apical abscess? Who wants an uglier picture than that of a severe case of Ludwig's angina? Many oral infections are dangerous; some may prove fatal. Antral infections are especially frequent and have been most shamefully slighted, though they are very dangerous. The failure of the untrained eye of the dentist to recognize specific conditions often means the carrying of the worst of all ailments to innocent members of the community. The victims of such ignorance soon lose faith in the dental practitioner and look to the more trusted and esteemed medical man.

And now, after so much has been said about these defects, wherein lies the remedy? The present is far from the happy day when dental education will require at least five or six years to obtain; notwithstanding, herein is the answer to the question; no possible solution exists elsewhere.

After all, the great blame of our short-coming lies at the door of the avaricious commercialism of the age. Commercial reasons alone blocked the four-year course in dentistry. I shall remember to my shame and regret the day I cast my vote against a four-year course in a meeting of a dental faculty of one of the best institutions of Pennsylvania. Other institutions could not stand the strain of seeing their students flock into the three-year schools and so they, too, dropped back to a three-year course, shamefully retreating, knowing full well that the public was being sacrificed on the altar of the almighty dollar. As soon as the public is awakened to the fact that it is the victim of wicked injustice and is moved to insist on better qualifications, a brighter day will dawn, but not till then. There will then be no weak link in the chain of dental educational institutions, for all will have to reach the high standard. Legislative enactment can and must settle the question. All praise to Virginia and other progressive states that to-day are seriously considering the question.

It is realized to-day that a great mistake was made in 1839, when application, made to certain medical colleges to establish dental departments in the regular medical course, was rejected on the ground that dentistry was not of sufficient importance to justify its recognition by the medical world. But, after all, it is an ill wind that blows nobody any good, and perhaps the separation is a good one. It is easier to break the shackles of ignorance than it might have been to gain liberty from the red tape of medical domination. The field as it stands to-day is ours. We can blame ourselves and not roll the responsibility on medicine. We can always change and mend our ways without let or hindrance from without.

Our dental colleges of to-day, as has been truly said, are but schools of mechanics; there is no reason why they should not be colleges of scientific medical dentistry, turning out men worthy of taking full charge of the human frame in general and the human mouth and adjacent tissues in particular. As I said before, unless the dentist is satisfied to be perpetually looked on as a mechanic, he must make a radical change in his preparation for his life-work. A thorough general medical and surgical training along special lines pertaining to general medical and surgical dentistry, together with scientific research work in the same fields, are crying needs of to-day.

A properly equipped "medico-dental college" would give to the world men able to pick up the missing links between kidney lesions and pyorrhea alveolaris, able to stimulate or depress catabolic and metabolic phenomena, salivary or other glandular activities, able to lay bare secrets of agonizing neuralgia and to give relief to sufferers from it, to cope scientifically with malformations, defects and injuries with crises without calling in the aid of the medical man, who is usually as ignorant of the important dental phases of such questions as the dentist is of the medical side.

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ABSTRACT OF DISCUSSION

DR. M. L. RHEIN, New York: The unfortunate condition of affairs which, in my opinion, has not been sufficiently emphasized by the essayist, is the ignorance of the general practitioner in regard to this aspect of the case. After a careful consideration of this subject for thirty years I am convinced that the solution of this problem lies with the medical practitioner more than it does with the dentist at large. There is a well-known principle that the demand for anything in this world is supplied, and if there is a demand for the properly educated dentist the material will be forthcoming to supply that demand; the demand is insufficient because of the ignorance of the medical man in not being able to discriminate primarily between the dentist who is properly educated, or has educated himself—it is immaterial—in the tenets of this specialty of medicine and the imperfectly educated man. It was because of this belief that I have presented a number of papers, some of them before this Section, trying to inculcate the point that the medical curriculum is mostly at fault in this subject. We all agree that the student when he graduates in medicine is ignorant of things about the mouth, and whatever information the physician obtains in his practice he gets by association and practice directly with the stomatologist. Unfortunately, my experience is that of the profession at large, that the medical man is unable to discriminate intelligently as to whether the mouth is being properly cared for or not. Now, that must necessarily be the province of the family practitioner. The patient places himself in his hands. His advice is followed, and he is the man who is at fault by means of the lack in his primary education. I believe that if this Section is to be successful in accomplishing this evolutionary work in the near future—and there has never been a shadow of a doubt in my mind that in the progress of events it is bound to come—our work should begin with the general practitioner. I do not believe we have been active enough in placing this point of view forcibly enough before the medical profession at large.

Within the past few years the American Medical Association has had as a part of its working force a Council on Medical Education, which to a certain extent has a governing influence over the medical curriculum of the medical colleges of this country, and I do not know of any way in which we can further this work more than by directing our attention at this time toward this Council which has charge of the medical curriculum of the country. I do not, as I said, advocate the teaching of the practice of dentistry in medical schools, but if students were taught the principles of dentistry, if they were taught what the normal physiologic mouth was and the pathologic significance of the changes found therein, they would not be in the position they are to-day—unable to appreciate the difference between a scientific and intelligent stomatologist and an ignorant mechanic. This is bound to be the crucial point of this question. No man with any self-respect is going to tell a physician of his acquaintance that a man practicing

dentistry in his immediate neighborhood, who is the dentist of this physician, is incompetent to practice. Not only that, but it would transgress every principle of ordinary ethics, it would contaminate every sense of self-respect.

I speak with much feeling on this subject, because I believe that if this Section would get to work officially, either by means of a committee or of resolutions sent to the Council on Medical Education of the American Medical Association requesting it to investigate the needs of incorporating such a course of study in the medical curriculum, more would be accomplished than we have been able to do in this direction in the past.

Last week the first step was taken toward remedying this evil; there was started the organization of the university dental department in Philadelphia, and enough universities have started this association to insure its success; and it is the divorce of the university dental schools from the proprietary dental schools which has been so much needed. Another point is that we are apt to be a little strong in our condemnation of the schools for the course that they have pursued, but a school cannot pursue its curriculum without students, and therefore if the demand exists for properly educated dentists the supply will be forthcoming.

DR. W. E. FISHER, New York: The essayist stated that there is a bill before the British Parliament to deny dentists the right to administer anesthetics. I do not know anything about the bill, but I think it is nothing against the dentist of Great Britain. In England, Scotland and Ireland the administration of anesthetics is a licensed profession itself, and it is for the protection of this profession that the bill is proposed and not to discriminate against the dentist. The surgeon there practically never administers an anesthetic; neither does the physician. Furthermore, the dental student of Great Britain has a better opportunity of gathering knowledge of things medical than the average dental student in any college, as a general thing, in America. Not that he is required to, but he has the opportunity. There is not a dental college in the United States that teaches general surgery. Every dental student in the United Kingdom must take a course in general surgery and general medicine, and it runs for six months, which is the usual course, and he takes his lectures side by side with the medical man. My knowledge is from experience as a student there.

DR. J. E. POWERS, Providence, R. I.: The issues presented by the essayist are not debatable. Every dentist knows only too well that all that has been said is true. The dental profession as a whole has accomplished wonderful results. The mechanical skill shown by dentists is in itself remarkable. Even had we done nothing else, the results accomplished along these particular lines are worthy of the highest praise. If we wish to make our profession equal to that of medicine, we must first make it a part of medicine. We cannot attempt to specialize intelligently without understanding the whole. Dr. Dray spoke of the aurist not requiring the services of a physician nor of a general surgeon when he performs a mastoid operation. This may be explained by the fact that he studies the whole subject of medicine before he specializes in the treatment of a part. I believe that before we can honestly regard our profession as an equal of medicine, we must first have a complete medical education. Whether or not we have a medical degree does not matter. A medical degree may mean everything or it may mean absolutely nothing. Unfortunately, there are dentists holding diplomas in medicine which are not worth the rags which were used to make the parchment on which their names are written. Politics, subterfuge, and commercialism are responsible for the conditions which permit a man to buy a diploma in the same manner in which he would buy so much merchandise. I know of one who is holding a diploma from a medical school who, if requested to answer twenty-five questions of his own selection embracing the subject of medicine, would fail absolutely. Therefore, what we need is not a parchment, which contains lies, but instead a proper knowledge of medicine. This alone will place dentistry on an equal footing with medicine. Following the kindly advice of Dr. Talbot, Dr. Brown and some others here, I commenced to study for the medical degree. I have finished the second year, and I shall always regret that I did not commence earlier. We need better instruction in the dental schools. I came from perhaps the best dental college in the country, yet when I came to study medicine I found I knew practically nothing of the general fundamental principles of pathology. Pathology is the foundation of both dental and medical practice, but it is not taught as it should be in the dental schools. I heard a dental educator say recently, "We cannot teach that subject as we would like to because we cannot interest the students in it." Therefore it all comes back to that great question of commercialism. I am glad that this paper is but one of a series. I believe that this series of papers is bound to bring good results and that it will be read by physicians throughout the world, and I am sure will be of great value in determining the factors which the essayist rightly says mould the future of dentistry.

DR. M. L. RHEIN, New York: I want to correct Dr. Powers. I trust I did not make myself so badly understood. I meant that this method is the one we have been pursuing for years, but it is work that has shown very poor results. The publication of paper after paper along this line in THE JOURNAL of the American Medical Association does not show the results we hoped for, and the only way to get such a result is to see that the curriculum of the medical college is amended.

DR. CARROLL W. ALLEN, New Orleans: It was my feeling of cooperation with the dentists that brought me from the Section on Surgery. I feel, too, that greater cooperation between the medical profession and the dentists is the thing we need.

DR. A. R. DRAY, Philadelphia: Ignorance of matters dental on the part of the medical man I thought had been conceded. I wish to make myself a little more explicit if I may, by way of showing the consequent evils of such shortcomings of medical practitioners. At present, in the neighborhood of Philadelphia, I believe there is a valuable life passing away owing to a condition that was very gravely aggravated by shameful neglect of the patient's mouth. It is a case in the hands of an eminent medical practitioner. About three years ago I was asked to see in a dental capacity the patient, who was a nervous wreck under the care of the said medical man. I did so and gave some advice that I thought was necessary. The condition of the patient's mouth then was an average condition. The patient is to-day dentureless. Every one of the teeth in that patient's mouth has since decayed away. The general condition has been terribly burdened by inability to masticate food, to say nothing of being slowly poisoned by a mouthful of diseased teeth, etc. The medical man has seen this patient time after time, and has virtually told me to stand aside "until he (the patient) feels better;" that the patient is too ill to have any dental work attended to. As a medical man I know that this patient is and has been all along too ill to have his dental work neglected and should have had it attended to; his oral condition is as grave as any other pathologic condition from which he may be suffering. Many other similar cases come under the observation of us all.

In reference to the point brought up regarding the new law in Great Britain regulating the qualifications required of those administering general anesthetics, I want to say that a discrimination was made directly against the dentist of Great Britain, only the medical practitioner being allowed to administer anesthetics. The question of dentistry being the equal of medicine never entered my head. I do not like it put that way—I referred to the question of making dentistry a branch of medicine. It should have that honor and as such have the support of the community at large and of the scientific world in particular; and dentistry should be recognized as a branch of medicine. But it should be insisted that those who practice it should qualify as members of the medical profession.

Child Study.—Prof. Karl Pearson, at the instance of the child study society (*Nature*, Dec. 2, 1909), has drafted a schedule for studying the factors influencing the social life of the child, to be filled in by heads of families of teachers intimate with the families. The schedules are being distributed by the society which appeals to members of learned societies and professional men and women in general to aid in the work by applying for schedules and filling in the particulars. The number of the family need not be large but particulars of father and mother and at least two children are desired.

NEISSER BACTERIN IN CHRONIC GONORRHEAL URETHRITIS *

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When any method of treatment is advocated by the research workers, and particularly when the new ideas advanced are no less than revolutionary, it becomes the duty of every clinical observer who puts these new ideas to practical test to report his findings, whether favorable or adverse, and thereby add to the sum of fact on which alone a sound conclusion may rest. This is my reason for presenting a single case of this kind.

History.—The patient, a robust young laboring man, 23 years old, single, rather loose in his habits, came under my care in May, 1907. He gave the following history of his present trouble. He contracted his first case of gonorrhea in July, 1905, and, on the advice of experienced friends, took a course of self-treatment for about six months, after which time the discharge ceased for the time. He was free from trouble for about six months; then he noticed the gradual reestablishment of a gleety discharge. He then sought medical advice, and was treated for several months with no effect on the local condition. He has had more or less discharge ever since.

Examination.—This showed a young man whose only physical abnormality appeared to be a slight gleety discharge from the penis. Palpation of the prostate, per rectum, showed that organ to be enlarged, boggy and tender, and pressure on it caused the appearance of several drops of milky fluid at the meatus. This fluid, on microscopic examination, revealed many gonococci and pus cells.

Treatment and Course of Disease.—I gave the man a very doubtful prognosis as to cure, and put him on classical treatment for chronic gonorrhea with prostatic involvement, including local and general measures and prostatic massage, under which the clinical symptoms improved markedly. Early in December the patient indulged in some rather unusual dissipations, which resulted in a very slight augmentation of the discharge, which, while unchanged in character, still showed, seven months after beginning treatment, numerous intracellular and extracellular gonococci. I then resolved to test the efficacy of the opsonic treatment, and procured a supply of stock Neisser bacterin. The first three injections were of 15,000,000 killed bacteria each; the second three of 25,000,000 each, and the last three of 40,000,000, 60,000,000 and 75,000,000 respectively. All injections were made in the thighs, using the right and left alternately, and were given at intervals of one week for the first six and of ten days for the last three.

Microscopic Examination.—The specimens, a report of which follows, were taken just before giving the injection of the same number. The microscopic examinations were made by Dr. Helene Knabe, of Indianapolis, to whom I am indebted for this valuable assistance and for permission to use her results.

Specimen No. 1 showed numerous gonococci.

Nos. 2 and 3 showed a very small number of bacteria, a few of which were intracellular.

No. 4 showed a slight increase in the total number, but never more than two pairs within a single pus cell.

No. 5 showed a marked increase in the number of bacteria, particularly within the cells, looking like a new reaction.

No. 6 showed a slight diminution in the number of specific cocci, and in No. 7 the number present was still smaller.

No. 8 contained multitudes of gonococci, largely intracellular. In one field there were sixteen cells containing from 2 to 25 bacteria per cell.

No. 9 was the worst slide of gonorrheal pus I have ever seen, looking as if all the dead bacteria injected had come to life in the discharge although, at this time, the clinical symptoms were the same as they had been.

No. 10, taken one week after the last injection of vaccine, showed very few cocci, never more than two to a cell.

General and local treatment was now resumed, and while the clinical picture remained constant, the microscopic findings varied greatly from time to time. Two or three specimens were reported as having so few gonococci that they were hardly to be found, and then followed one showing cells which contained from 50 to 100 bacteria apiece, these phagocytes occurring in groups, and containing practically all the gonococci in the specimen.

In June, 1908, with conditions in about the same status as at first, the case passed out of my observation.

In this case the Neisser bacterin clearly demonstrated its ability to increase phagocytosis, but did not appear to produce any favorable effect on the course of the disease. There were, however, no untoward effects from its use—no pain or soreness at the site of injection and no symptoms of any kind.

The pronounced increase in the number of bacteria in the discharge after beginning the vaccine treatment is a condition I have never seen reported, although one or two other clinical observers have told me that they had seen results similar to mine.

* Condensed from a Paper Read before the Twelfth Councillor District (Ind.) Medical Society, at Fort Wayne, November, 1909.

SUPPURATIVE PERIGASTRITIS

A CASE WITH TUMOR FORMATION FOLLOWING PERFORATED GASTRIC ULCER OF THE GREATER CURVATURE

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This case seems to be worth publication on account of the rarity of the condition and the difficulty of the diagnosis.

History.—B. F., aged 45, was first seen by me in my office, June 15, 1906. Up to the summer of 1902 the patient had never suffered from stomach or bowel trouble. At that time he began to complain of constipation and hemorrhoids, for the former of which he had been under treatment several times. None of the ordinary cathartics were so promptly effectual as Epsom salts. The patient often experienced a sensation of fulness of the stomach and suffered from severe headaches. These symptoms, however, disappeared as soon as the cathartics were taken. The patient also complained of acid eructations after eating. His appetite was always very good and he had never vomited or had any abdominal pain. On two occasions he observed bright blood in the stools, which he ascribed to the hemorrhoids. The patient could not remember having had any of the usual diseases of childhood. At the age of 18 he had a "chancre" for which he was treated by a physician for four weeks. He had never noticed any rash on the skin. Two years before I saw him the patient had had a severe attack of facial erysipelas, on account of which he was confined to bed for six weeks.

First Examination.—Physical examination, June 15, 1906: Strong, robust-looking man. Teeth and gums in poor condition. Tongue moist and slightly coated. Lungs; anteriorly, slight evidence of emphysema; posteriorly, clear. Heart sounds, clear, no murmurs. Abdomen: any tenderness or resistance to be elicited either by superficial or by deep palpation. Liver: not enlarged. Spleen: not felt. In the anal region several hemorrhoidal tumors to be seen. Patellar reflexes: lively. In the urine neither sugar nor albumin could be demonstrated. Examination of gastric secretion and motility, June 16 and 18, 1906: The filtrate of the material expressed from the stomach after Ewald test-breakfast showed (two examinations): free hydrochloric acid, 38 and 36; total acidity, 70 and 76. Starch digested to amidulin (shown by bluish color after addition of Lugol's solution). The morning after a Boas test supper no macroscopic nor microscopic evidence of stasis could be found in the 12 c.c. of gastric juice expressed from the fasting

stomach. A diagnosis of secondary (reflex) hyperchlorhydria was made and operation for hemorrhoids was advised.

On May 22, 1907, the patient again consulted me. He then said that while the constipation was less after the operation he was occasionally obliged to have recourse to Epsom salts. He complained of some epigastric pain, beginning one to three hours after meals. The pain was, however, worse when the stomach was empty and the patient was often forced to take food in order to get relief. This pain, beginning after meals, seemed to depend but little on the character of the food and to a greater extent on the quantity taken. Lately even milk and soup had been poorly borne.

Second Examination.—No abdominal rigidity or tenderness could be elicited even at that time. Examination of the gastric contents on the three following days showed well-digested chyme. The free hydrochloric acid was 36 and 40, the total acidity 80 and 80.

A dietary suitable to the patient's hyperacidity was ordered; sodium citrate and burnt magnesia each 0.6 gm. (grs. x) three times a day was prescribed, and the stomach was washed out three times a week with silver nitrate solution (1 in 10,000). After six washings the patient felt well. The pain after eating had quite gone, though there was still barely perceptible tenderness over the empty stomach. On July 2, 1909, the patient consulted me for the third time. Until June 18 he had felt comparatively well. On that day, five hours after the usual supper-time, as he was about to retire, he was suddenly seized with a severe, cramp-like pain, just above the umbilicus. The attack lasted about three hours. A hypodermic injection of morphin had no effect on the pain, but after a high enema the attack terminated. Attacks of cramp-like pain, though not of the same intensity and duration, were, however, repeated, at first, every day; later, every second or third day. The pains were for the most part just above the umbilicus; occasionally they radiated to the right hypochondrium, but never to the left. The patient's physician, who saw him during one of the attacks, thought that he was suffering from gall-stones. The attacks were in no way connected with the ingestion of food.

Third Examination.—July 2, 1909: This revealed marked sensitiveness midway between the ensiform and the umbilicus. There was some tenderness one finger's breadth above the navel in the right parasternal line. Neither the characteristic dorsal pain point for ulcer (to the left of the spine), nor for gall-stones (to the right) could be elicited, nor despite most careful palpation of the entire abdomen could any rigidity be appreciated. The patellar reflexes were present but not exaggerated. Four examinations for occult blood in the stool with guaiac and benzidin were negative. Since the patient had had a chancre of doubtful nature the Wassermann reaction was tried for me by Dr. Kaliski on August 3, but it was negative.

Course of Disease.—The attacks of cramp-like pain continued intermittently until August 20. Atropin sulphate in 1/100 grain doses four times a day shortened the attacks but did not afford complete relief. The patient next began to complain of continuous distress, especially when walking or sitting. This regularly disappeared on lying down. On August 22 this condition was the same as on July 2. No abdominal rigidity was demonstrable. From August 24 to September 12 the patient had no attacks of colic but the continuous pain, present when walking or sitting, persisted, though there was no pain when reclining. The patient thought he would feel quite well if he could lie down all day. On the evening of the 12th he had a chill. He feared cancer because he had lost eight pounds in weight during the last week; this was the first time he had mentioned wasting.

Fourth Examination.—This revealed a solid mass (indefinite because of the rigidity) to the right of the mid-line and just above the navel. Distinct tenderness was elicited by pressure over the tumor; coughing and laughing were painful. Pressure from before backward over the liver caused no pain. Examination of the gastric juice on the following day showed a marked diminution in the hyperchlorhydria; free hydrochloric acid 12 and 10; total acidity 40 and 40; lactic acid negative; starch digested to maltose.

Operation.—On September 22 laparotomy (excision of inflammatory mass containing multiple abscesses adherent to the free edge of the liver and the greater curvature of the stomach) was performed by Dr. A. A. Berg at the Mount Sinai Hospital. A three-inch incision was made over the gall-bladder region. The gall-bladder was found to be perfectly normal. To the left of the latter and entirely separate from it was a mass the size of an orange, adherent to the free edge of the liver, the abdominal parietes and the greater curvature of the stomach, where an opening the size of a pin-hole was noted. The pylorus was patent. The mass was first separated from the liver. In doing this several small abscesses were opened and their contents evacuated. The adherent mass was then excised in sections. The stomach, together with the transverse colon, was lifted upward and the upper part of the jejunum was located with a view to doing a posterior gastro-enterostomy. As the patient was taking a very poor anesthetic the latter operation was not performed, and the abdominal incision, which had been lengthened to about six inches, was closed.

Pathologic Report.—The specimen consists of several small sections which together are about the size of a small orange. The surface of the mass is slightly roughened and the interior very hard, resembling scar tissue with some areas of necrosis and small abscess cavities. The mass appeared to be composed of omentum with inflammatory changes. Microscopic examination revealed acute and chronic inflammation. Culture from the pus showed Gram-positive cocci in the smears from one flask and no growth in the media in the second.

Three weeks after the operation the patient was discharged well.

In 1895 Hofmeister reported a case of ulcus ventriculi adherent to the anterior abdominal parietes which, causing perigastritis and infiltration of the anterior abdominal wall, gave rise to a tumor. Up to that time only two similar cases had been described, one from Billroth's and one from Mikulicz's clinic. But in neither was the diagnosis made before operation. Hofmeister considered the following symptom-complex as typical of these cases:

> Some time after the beginning of long-continued indigestion of greater or less severity, a tumor, very gradually increasing in size, develops in the left epigastrium. During the later years of the malady pain becomes pronounced. This is very severe and is confined to the vicinity of the tumor. It takes the form of attacks, especially after the ingestion of food. Vomiting was observed in all three cases. Hematemesis once. Finally the nutrition is impaired to a marked degree, and the patient may become greatly emaciated.[1]

My case does not coincide with Hofmeister's description in all respects. The tumor arose in the right epigastrium. The attacks of colic bore no relation to the ingestion of food. Vomiting was never a pronounced symptom. Possibly the nutrition would have been markedly impaired had the tumor not been demonstrated so early. Hofmeister says nothing at all about suppuration in the tumor tissue. He probably had in mind cases of adhesive perigastritis, concerning which all authors remark on the difficulty or impossibility of the diagnosis. Rosenheim[2] says that one should always think of perigastritis as the cause of pain whenever internal medication (especially large doses of bismuth or silver nitrate) fails in the treatment of any very chronic ulcer, and whenever mechanical treatment, e. g., lavage (if it be indicated by motor disturbances) systematically carried out is without avail. As already mentioned, treatment with silver nitrate was not without benefit in our case, nor was there any disturbance of motility, and the pylorus was quite patent. Neither is much of Rosenheim's description applicable to our case.

1. Hirschfeld: Ueber peritonealen Adhäsionen durch Ulcus ventriculi, Grenzgeb. der Med. und Chir., vi.
2. Rosenheim: Deutsch med. Wchnschr., 1895, No. 3.

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According to Boas,[3] perigastric adhesions as such are only exceptionally recognizable. In his opinion, one can in most cases hardly ever arrive at a position beyond probability or supposition.

In my opinion, the chief point lies not in recognizing the perigastritis or the character of the tumor, but in diagnosing the latent gastric ulcer which leads to these complications. Duplant[4] rightly says that symptoms of perigastritis are commonly seen in dyspeptics in whom an ulcer has been suspected for a long time. According to this author, the only symptom of value is the palpation of an indurated mass corresponding to the affected part. In an analysis of 17 cases he considers that cases of ulcer with perigastritis do not often lead to scar formation. This opinion is in complete accord with the observations in our case.

During the operation a small opening was found in the greater curvature, but there was no sign of cicatrization. Possibly the perforation occurred on that evening when, five hours after his supper, the patient felt the severe pain just above the navel. The perforation was not fatal, because the stomach was nearly or quite empty; because the perforation itself was small, and because it was in some way closed by the omentum, thus producing only a local suppurative process with consequent tumor formation.

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CALCIUM IN TUBERCULOSIS

A NOTE ON ITS EFFECT ON THE TEMPERATURE CURVE

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The following observations on the effect of calcium administration on the temperature curve in tuberculosis were suggested by Croftan's summary of the work done in calcium metabolism in tuberculosis.[1] It was stated by this writer that the preliminary results from the administration of calcium salts, "by mouth or other routes," had given suggestive figures as to the modification of the temperature movements in tuberculized animals. The preliminary work which led up to the question of the effect of calcium on the temperature had its origin in the investigation of the urinary calcium excretion in tuberculosis. It was shown by Senator in 1877 and by Ott in 1901 that there is an abnormal amount of calcium excreted in the urine of tuberculous patients. Croftan tuberculized five dogs with a pure culture of the tubercle bacillus injected directly into the jugular vein. Each animal showed a progressive increase in the amount of calcium excreted in the urine. The same investigator stated that advanced tuberculous subjects with destruction of lung tissue show an increase in calcium excretion from the normal amount (0.2 to 0.3 gm.) to as high as 0.47 gm. He states further that there is a selective affinity between calcium and one of the protein substances occurring in the bodies of the tubercle bacillus. This latter substance, deutero-albumose, has been isolated also from culture-media in which tubercle bacilli were growing, from Koch's old tuberculin, from tuberculous urine and sputum, and from tuberculous lymph glands and pulmonary foci.

It has been shown by Kühne that deutero-albumose will produce a rise in temperature analogous to a tuberculin reaction if injected into tuberculized animals. If, however, the affinity of deutero-albumose for calcium be saturated, this proteid when injected into animals loses in large part its fever-producing properties. Croftan experimented with tuberculous cattle and artificially tuberculized dogs and rabbits and concluded that he was justified, apparently, in stating that the addition of calcium to the probable chief pyretogenic principle of the tubercle bacillus robs it of its fever-producing power. It is stated further that it is exceedingly difficult to procure deutero-albumose free from calcium, and the two can be separated only by chemical means. It is to be inferred, therefore, that the selective affinity of the deutero-albumose contained in the tubercle bacilli and other body tissues and fluids have been saturated. Although it has been shown that the calcium excretion has been increased in tuberculosis, it has not been shown that not enough calcium has been retained to satisfy the selective affinity of the body or bacillary proteids.

In consideration of the long-standing use of hypophosphites, glycerophosphates and other calcium-containing preparations, it was not confidently expected that the administration of calcium salts would cause any decided effect on the temperature curve in tuberculosis. However, thirty tuberculous patients, all showing a more or less continuous elevation of temperature, were selected mainly from the Lucas County Hospital. The temperature of these patients had been recorded previously, so comparisons could be instituted. Each patient was given calcium lactate, 0.3 gm., every four hours. This was continued four weeks without any particular change in the former treatment received by each patient. This had been variable in the individual case, but included sleeping on the porch, forced feeding within certain limitations, injections of tuberculin (B.E.) and mercury succinimide, tonics and other measures symptomatically rendered necessary. Most of the cases were sleeping on the tuberculosis porch. Only those cases were given calcium that had been showing a more or less continuous rise in temperature. It has not been my custom to administer specific temperature-lowering drugs, such as the coal-tar preparations, to pyretic tuberculous patients, relying more on the outdoor life and other hygienic conditions to lower the fever. For this reason whatever virtue might be inherent in the calcium probably would be observed. No attempt was made to select cases in particular stages of the disease. They have varied from several months' duration to long-standing, chronic cases of several years' duration, but practically all of the lung cases showed advanced involvement of one or both lungs. The youngest patient was a child of 5 years, the oldest were a man and woman, each 63 years. Nine patients were females, twenty-one males. Four patients only were under treatment for forms of tuberculosis other than of the lungs. These were cases, respectively, of peritoneal tuberculosis, tuberculous abscess of thigh, renal tuberculosis and tuberculosis of hip joint. Three of the pulmonary cases died shortly after the observations herein recorded were concluded. Three patients showed a noticeable alteration in the temperature curve. One was a white boy of 8 whose tuberculous hip was rendered immovable by plaster dressings. The second was a white girl of 19 under

3. Boas: Diagnostik und Therapie der Magenkrankheiten, Ed. 4, 1897.
4. Duplant: Rev. de méd., 1903; Arch. f. Verdauungsk., x, 97.
1. Transactions of the Sixth International Congress on Tuberculosis.

treatment before admission to the hospital in whom the disease was more or less arrested. The third was a patient not in the hospital but under careful observation and treatment. The remaining cases, more or less advanced, as stated above, showed little alteration. The time of administration was short (four weeks), but, so far as I could observe, the result was *nil*.

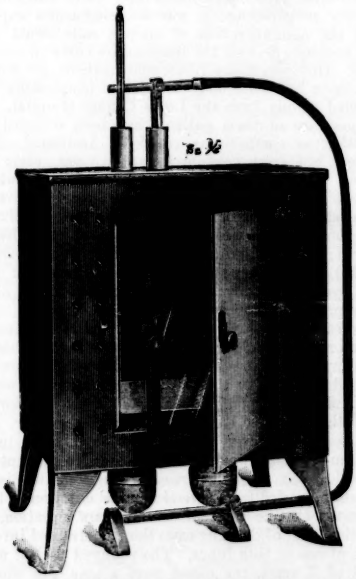
The conclusion which reasonably may be drawn is that pyretic tuberculous patients in various stages show no response, in so far as the temperature is concerned, to the administration by mouth of calcium salts.

237 Michigan Street.

COMBINED OPSONIZER AND INCUBATOR

F. J. CLEMENGER, M.D.
ASHEVILLE, N. C.

The rapid increase in the use of the opsonic index and vaccine therapy in the hands of private workers has necessitated a simplification of the apparatus required. The combination of an opsonizer and incubator large enough for the needs of a single individual has been



Combined opsonizer and incubator.

brought about in the design illustrated here, which explains itself. The apparatus, devised by me, has been in use for the past year in the inoculation department of St. Mary's Hospital, London, where I have been an assistant under Sir Almroth Wright, and has been found to be satisfactory in every respect. The temperature is maintained practically constant by using a Reichert regulator, and with a single fire one has constantly ready an opsonizer as well as an incubator.

The full-sized model is only 12 inches square, and yet will hold in the incubating chamber 36 vaccine tubes, and on either side of the incubating chamber are situated openings for 24 opsonic pipettes. It is beautifully finished in copper and makes a very neat piece of laboratory equipment. Maw, Son & Sons, London, have placed the apparatus on the market.

PELLAGRA

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Believing that a case of pellagra in which the etiology appears to be clear would be of interest, I wish to report the following case:

History.—Mr. R., white, aged 54, farmer by occupation, consulted me in October, 1909, complaining of vertigo, intense gastric pain, nausea and frequent emesis. On examination he was seen to have an advanced and marked case of pellagra, the integumentary, nervous, and gastrointestinal symptoms being typical and differing in no way from those seen in the usual case of pellagra. The first symptoms of the present illness were noticed in July, 1909, when the patient began to suffer with a stomatitis, and the dorsal surface of his hands became inflamed—sunburned, he thought. When questioned in regard to the amount of meal used in his diet he stated that in May, 1909, he began to eat meal in the raw state, each day eating several large handfuls of it; in fact, his diet consisted largely of raw meal. The meal was always obtained from the same dealer and was western meal.

Another interesting point is that the horse that was fed on the same meal developed "blind staggers" and died. This, of course, may only be a coincidence, but it recalls the theory advanced by Dr. R. H. Bellamy of Wilmington, N. C., in regard to the probability of pellagra and "blind staggers" being due to the same cause.

Therapeutics

CHILBLAIN

Chilblain is an affection which has been sadly neglected in most text-books, by many practitioners, and by not a few patients. The fact that, although it causes considerable discomfort, it is not usually followed by serious results, is in part at least accountable for this neglect.

The conditions favoring chilblain are impaired and weak circulation. Hence it is seen chiefly in the lower extremities, especially in the feet, but may affect also the fingers, ears, nose and cheeks, parts especially exposed to the cold.

It occurs in individuals whose power of resistance is not great, and is, therefore, observed with special frequency among the young in whom this power has not become fully developed, and in the old, in whom resistance has become enfeebled. It also occurs in adults of middle life who have become debilitated. Finally, robust individuals sometimes suffer from it after severe exposure.

The chief recognized cause is exposure to extremes of temperature, and especially to dry or wet cold after the parts have been warmed, and particularly after they have been subjected to artificial heat, as happens when the feet have become overheated in front of a stove or over a register through which heat is coming from a furnace.

The principal manifestations of the disorder are a burning heat, with itching and redness. These symptoms are usually worse at night.

Rapid change of temperature or prolonged exposure to cold, and especially to cold combined with dampness and moisture, undoubtedly produces slight histologic changes, of an inflammatory character, in the cutaneous structures. These have been designated by some writers as chronic erythematous dermatitis.

Careful prophylaxis should always be observed. The hands and feet should be kept warm and dry, and the coverings of these parts should not be irritating or too tight. When the extremities have been chilled, they should not be warmed too rapidly.

Some patients need constitutional treatment to combat general debility and to improve the circulation.

Relief is sometimes obtained by painting the affected part with tincture of iodin, or with equal parts of tincture of iodin and tincture of opium. Oil of peppermint diluted with from one to six parts of glycerin has been recommended as affording relief.

F. Gardiner, M.D., of Edinburgh (*Practitioner*, February, 1908), recommends ichthyol, which may be used in the form of a 10 or 20 per cent. ointment with lanolin (adeps lanæ hydrosus). This should be spread thickly on linen, and applied for several successive nights. It relieves the congestion, inflammation, burning and itching.

Gardiner also recommends formalin, which, however, should be used with care if there are abrasions on the skin, on account of the intense smarting which follows its application to abraded surfaces. Formalin, Gardiner states, may be used in the form of a 10 to 50 per cent. ointment, but it must not be continued too long on account of its astringent action, which may result in hardening and cracking of the horny layer of the skin. Comparing the two drugs, he thinks that formalin is more effective, more lasting in its results, but harsher in its action, and therefore better adapted for use in men; while ichthyol is more soothing, more simple in application, and consequently better adapted for delicate skins. He has also used with benefit the faradic and high-frequency currents and the *x*-ray.

If the chilblain undergoes ulceration, the same author recommends the following ointment:

R.	gm. or c.c.		
Hydrargyri ammoniati	30		gr. v
Ichthyol (ammonii sulphoichthyolatis)	60		m. x
Amyli	8	or	
Zinci oxidi	8		ää, ʒii
Petrolati	15		ʒss

M. et Sig.: Spread on linen and apply to part.

When the inflammation proves resistant to treatment, the possibility that the affection is something more serious than chilblain, perhaps either lupus erythematosus or Reynaud's disease, must be considered.

C. Ritter (*Münch. med Wchnschr.*, May 7, 1907) reports 150 cases treated by Bier's method of artificial hyperemia. He finds that this acts best in acute cases and in chronic cases occurring in fairly healthy persons. The action is always beneficial.

Hot air he finds to be most useful when the condition is of long standing.

FROSTBITE

If chilblain is regarded as a chronic affection generally due to the action of cold, frostbite may be regarded as an acute affection due to the action of cold. When a portion of the body not properly protected is exposed to intense or extreme cold the tissues become affected, and if the cold is sufficiently intense and the exposure is sufficiently prolonged the part becomes frozen. Individuals in whom the circulation is weak, and particularly the young, the old and the debilitated, are especially likely to suffer from intense cold. Likewise those parts in which the circulation is least active, and which are least protected by clothing, as the ears, hands and feet, are prone to suffer.

Different degrees of frostbite are recognized. In the slighter forms, the smaller arteries become contracted, the circulation becomes slow, and there is venous stasis. This is accompanied by a change in the various structures, and also in the blood contained in the vessels, of the affected part.

If the cold is more intense or the exposure is more prolonged, vesicles and blisters or blebs, containing often sanguinolent fluid, form.

Finally, if the exposure is sufficiently severe and sufficiently prolonged, the entire part becomes congealed, and freezing and gangrene result.

Locally the part becomes cold, pale, or bluish, shrunken or wrinkled, and there is loss of sensation and diminution, or entire loss, of the power of motion.

Constitutional symptoms vary with the condition of the individual and the extent of the lesion. Loss of energy, fatigue and weakness are early symptoms. These may be followed by indisposition to continued exertion, difficulty of speech, delirium, coma, and death.

When a small part of the body is affected to a moderate degree the disturbed circulation must be restored gradually. The patient should lie down in a cold room, but should be well covered to protect him from further effects of cold. He should be given hot tea and coffee. The affected part should be rubbed with snow or cloths wrung out of cold water. If the part is warmed too rapidly there is believed to be danger from the too rapid restoration of the altered blood corpuscles to the general circulation.

If there are blisters, great care should be taken to treat them with the most minute attention to the details of aseptic and antiseptic procedures, in order to prevent infection and inflammation, which find in these cases all conditions favorable to their occurrence.

When gangrene develops, amputation is necessary; it should be delayed, however, until reaction has occurred, but should not be postponed until secondary debility has made the result of an operation doubtful.

If grave constitutional symptoms with actual or threatening coma are present when the patient is first seen, he should be kept in the recumbent position, wrapped in dry blankets, in a cold room. Warm, stimulating drinks, particularly tea or coffee, should be administered. The parts of the body affected should be rubbed gently and continuously with snow or with cold, damp cloths. Artificial respiration should be employed if needed, and the efforts at resuscitation and restoration should be continued for a long time, if necessary.

After recovery from the most severe forms, care should be taken to avoid fatigue, over-exertion, and exposure.

After a part has been restored from a condition of frostbite, its susceptibility to the action of cold is greatly increased, and caution should be exercised to avoid its becoming affected again by protecting it from exposure to cold, or by applying frequent brisk friction to it, if it is allowed to go unprotected.

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[*For other information see second page following reading matter*]

SATURDAY, FEBRUARY 19, 1910

A PEPTID-SPLITTING FERMENT IN THE GASTRIC JUICE IN CARCINOMA OF THE STOMACH

That carcinoma of the stomach is, at present, practically a hopeless malady, is borne out by medical and surgical statistics. The cause of this appalling fatality is not difficult to discover and is found in the fact that, with very few exceptions, a positive diagnosis can be made only after all hope of a permanent operative cure has vanished. When the disease has advanced to the stage pictured in the text-books as typical—characterized by anacidity, with the presence of lactic acid and Boas-Oppler bacilli, by coffee-ground vomitus, and perhaps by a palpable mass in the abdomen—the possibility of lasting relief from excision is gone because of the almost certain existence of metastases. Any new diagnostic aid, therefore, is more than welcome.

Fischer[1] has shown recently that protein digestion in carcinoma of the stomach is carried beyond the usual stage characteristic of the stomach, in that mono-amino and di-amino acids are formed. Their presence accounts for the hydrochloric acid deficit so often encountered; the hydrochloric acid combines with the amino groups, while the free carboxyl raises the total acidity. Such hydrolysis might result from the presence of pancreatic juice or blood, both of which contain ferments capable of splitting proteins into amino-acids. But amino-acids were found in the gastric contents in carcinoma in the absence of trypsin or blood, and it was probable, therefore, that a special ferment, the product of cancerous tissue, was present and that it carried the cleavage of the polypeptids to the amino-acid stage.

Neubauer and Fischer[2] have attempted to demonstrate the presence of such a peptid-splitting ferment in the stomach contents of patients suffering from gastric carcinoma. For their experiments they used an artificially prepared polypeptid, glycyltryptophan, which yields tryptophan on hydrolysis. They first examined carcinomata and sarcomata from various parts of the body and found that these malignant tumors contained a ferment capable of splitting glycyltryptophan much more rapidly than that present in normal tissues and in benign growths. The pepsin-hydrochloric acid from normal men and dogs failed completely to hydrolyze glycyltryptophan. Their attention was next directed to gastric contents obtained from one-half to three-quarters of an hour after a test breakfast. Obviously, pancreatic juice and blood and the preexistence of tryptophan in the stomach contents had to be excluded. These conditions being fulfilled, the specimen is suitable for the examination, which is simple; a small quantity of glycyltryptophan is placed in a test-tube with about 10 c.c. of the filtered gastric contents, to which toluol is added to prevent bacterial growth. After four hours in the incubator, a small quantity of the fluid is removed with a pipette and tested with bromin water for tryptophan. In four normal individuals, in ten with peptic ulcer, in twelve with gastric diseases other than carcinoma, in four suspected of carcinoma, and in the vomitus from two cancerous patients, the test was negative, while in the seventeen cases of undoubted gastric carcinoma and in six suspicious cases a positive result was found.

The experience with the test is too limited, as yet, to determine how early in the course of the disease this ferment may be found in the stomach contents. That it is of diagnostic significance seems assured. Whether it will be of value in making an early diagnosis—at a stage of the disease when a surgical cure is possible—remains to be demonstrated.

1. Deutsch. Arch. f. klin. Med., April, 1908, xciii, 98.
2. Deutsch. Arch. f. klin. Med., 1909, xcvii, 499; abstr. in THE JOURNAL, Jan. 1, 1910, p. 86.

THE PHAGOCYTIC ACTIVITY OF THE LIVER

Many observations have emphasized from time to time the important part performed by the liver in protecting the body from soluble poisons reaching the blood through the digestive tract, until this function of the liver is now generally appreciated. That the liver has an equally highly developed capacity to remove bacteria, and foreign bodies generally, from the circulating blood is perhaps not so well known. For the purpose of performing this function it has developed a specialized cellular organization, which would seem, according to recent studies, to exceed in phagocytic activity all other fixed tissue cells and at least to equal the leucocytes in this respect. As the other great phagocytic system, the lymphatic glands, has specialized endothelial cells with highly developed phagocytic power, whose particular function is to take up bacteria and foreign particles coming to the glands in the lymph, so, too, in the liver specialized cells of endothelial origin have been set aside for the purpose of ridding the blood of similar obnoxious bodies, thus leaving the liver cells free for their multitudinous chemical operations. These stellate cells, commonly known as Kupffer cells, after the anatomist who first described them, lie in intimate relation with the blood-channels of the liver, on the one hand, and the liver-cells themselves, on the other, and their endothelial origin and functional specialization are now generally recognized by pathologists.

It has long been known that these cells have a striking tendency to take up pigment from the blood in diseases with much hemolysis, and bacteria and fat droplets have often been observed in them. Their great importance in the defensive mechanism of the body was first made prominent by the experiments of Cohn, in 1905, who found that if a watery suspension of colloidal silver was injected into the ear vein of a rabbit the Kupffer cells became packed with the silver particles within a few minutes, while no other cells in the body could be found to take up the particles in any considerable amount. Since the blood from the systemic veins reaches the liver less directly than almost any other part of the body, it is evident that the Kupffer cells must be actively phagocytic to a high degree, at least for colloidal silver.

More recent studies have demonstrated that the assumption is warranted that these cells represent a most important and highly developed means of defense, not only against colloidal silver, but also against bacteria as well as mineral poisons.[1] Even harmless particles, as fat droplets, are taken out of the blood with great rapidity by the stellate cells of Kupffer. Schilling[2] has made an especially extensive study of these cells and finds that not all forms of bacteria are taken up with equal facility by them, pus cocci being more readily engulfed than tubercle bacilli, while other observers have noted a special avidity for colon bacilli. In case tubercle bacilli infect the liver, it is the stellate cells in which they lodge and which form the chief cells of the tubercle. This has been demonstrated in a series of ingenious experiments by Oppenheimer,[3] who stained the Kupffer cells with colloidal silver, as Cohn had done, and then injected tubercle bacilli; in the forming tubercles in the liver it could be seen that the silvered Kupffer cells formed the "epithelioid" cells and the giant cells, thus establishing the disputed point that these characteristic cells of the tubercle may be of endothelial origin. These experiments also establish that Kupffer cells have proliferative as well as phagocytic activity which may be used as a means of defense, and Nathan,[4] observing their great activity under the influence of bacterial toxins, believes that these cells also play an important part in serum immunity as well as in cellular defense. It would seem probable that the endothelium of the liver, because of its incessant subjection to the influence of bacteria and poisons of all kinds coming from the digestive tract, has acquired a greater power of reaction than any other cells in the body, so that, even when the bacteria or poisons are first disseminated through the systemic rather than through the portal circulation, the specialized defensive hepatic endothelium, the stellate cells of Kupffer, are found to play the leading part in phagocytosis and defense.

1. Brötz: Frankfurt. Ztschr. f. Path., 1909, iii, 931.
2. Schilling: Virchows Arch f. path. Anat., 1909, cxcvi, 1.
3. Oppenheimer: Virchows Arch. f. path. Anat., 1909, cxciv (Beiheft), 254.
4. Nathan: La cellule de Kupffer, Paris, 1908.

ALCOHOLISM AND THE GERMINATIVE CELLS

Recently we commented in these columns on the observations made by Fahr concerning the anatomic changes resulting from chronic alcoholism, which were found to be much less marked in regard to renal and vascular lesions than has been believed by most of us; although fatty changes in the liver and chronic meningeal thickening were found very frequently in the bodies of hard drinkers. An interesting supplement to the above observations is furnished by E. Bertholet[1] of Lausanne, who has systematically examined the testicles of alcoholics coming to autopsy.

It has long been believed, on the basis of clinical experience and statistical evidence, that paternal alcoholism may have a considerable and deleterious influence on the offspring, Forel in particular having contended that alcoholism injures the germinative cells; he supported this view with statistics from asylums for the insane and epileptic, and gave to the alteration in the germinative cells the title of *"blastophtorie."* Not only are nervous and mental defects attributed to paternal alcoholism, but also the collected histories of congenital cardiovascular anomalies show the presence of this influence to a degree that cannot well be dismissed as fortuitous. Even with experimental animals it has been found that chronic alcohol intoxication of the male leads to the production of defective offspring, according to several observers.

Until now, however, the influence of alcoholism on the germ cells has had little consideration from the standpoint of pathologic anatomy, although in 1898 Simmonds of Hamburg reported that in 60 per cent. of chronic alcoholics azoospermia was present. Bertholet examined the testicles of seventy-five men whose history as to alcohol was known, of whom thirty-nine were habitual users of alcohol in large amounts, and most of whom died before the fiftieth year. In all but two of these thirty-nine alcoholics a more or less marked atrophy of the parenchymatous elements and an increase in the interstitial connective tissue were found, these changes differing from the ordinary senile involution. Especially marked were the changes in the testicles of men who died of alcoholic cirrhosis; this coincidence of hepatic and testicular fibrosis has been observed previously by others, who, however, did not connect the changes in the testicles with the alcoholism. In proportion to the degree of atrophy present the process of spermatogenesis is defective, often with total absence of spermatozoa, or with abnormalities in the changes leading up to the formation of the spermatozoa. While chronic diseases, especially cancer cachexia, may cause similar changes, yet the frequency and advanced degree of testicular atrophy is characteristic of alcoholism. The relation of these microscopic changes to the recognized influence of paternal alcoholism on the offspring is evident.

1. Bertholet, Ed.: Centr. f. allg. Pathol., 1909, xx, 1062.

HARMONY AND HONESTY

In the Correspondence Department of this issue is a letter that every physician and pharmacist should "read, mark, learn and inwardly digest." Coming from the chairman of the Committee on Revision of the U. S. Pharmacopeia, its very source would command attention, even if the excellence of the suggestions it contains did not do so. As Professor Remington says, the nostrum evil—that *bête noire* of both professions—"is being controlled to an extent that few physicians realize." The medical profession probably fails to appreciate the very great changes that have taken place in the nostrum world within the past half-decade. Coincident with a changed attitude on the part of the majority of pharmacists toward "patent medicines" has been as great a change on the part of physicians toward the "ethical proprietaries." Such changes augur well for the future of pharmacy and medicine. We may look hopefully forward to the time when the physician shall no longer be a prescriber of ready-made mixtures, but a writer of *real* prescriptions and when the druggist shall cease being a retailer of "patent medicines" and become a scientific compounder of official drugs. This professional millennium, however, will not be reached by ignoring the "patent medicine" and "proprietary" evil, which, like a festering sore in the pharmaceutical-medical body, causes both local irritation and systemic weakness. Each profession must attack the problem squarely and openly, and, recognizing the seriousness of the disease, be willing to apply heroic treatment. By all means, let physicians and pharmacists work together in harmony and good fellowship, and let it be the harmony that comes from a unity and honesty of purpose and a common desire to render greater service to those who are dependent on both professions—the sick and suffering public.

THE POWER OF PUBLIC OPINION

For some time the better class of metropolitan newspapers, with but few exceptions, have excluded the advertisements of the notorious quacks that infest the larger cities of the country. One of the exceptions was the New York *World*—possibly the greatest paper which continued to carry that class of advertising. Now we learn that the *World* has closed its columns to the quacks, and the reason for this step is given by *Printer's Ink:* "The *World* had no fine-spun moral motives in crowding several of the 'old doctors' out in the cold; it appreciated to the full the $30,000 a year which this publicity brought to its till. Yet the manager had had occasion to observe quite frequently that the 'big' advertisers of established character and clean reputation disliked being put into the company of the 'doctors' ' copy." In view of this attitude on the part of the decent advertiser, those in control of the *World* "have wondered whether they might not actually make money by passing up this $30,000." They have evidently decided they might. The effect of this changed policy on newspapers in general is discussed by *Printer's Ink:* "When a powerful and matter-of-fact journal like the *World* . . . decides that it's *poor business* to harbor the 'doctors' longer, other newspapers are likely to ask themselves similar questions and wonder whether they might not actually make more money if they should follow suit." To attempt to moralize on this matter would be fatal. Enough that a step—a big step—toward decency has been made. We can at least congratulate ourselves that an enlightened public opinion has brought about a state of affairs where newspapers find that it actually pays—pays in hard, cold cash—to reject indecent and fraudulent advertising. Even the most pessimistic must acknowledge that conditions are improving.

AUTOMOBILE DATA

In connection with the fourth Automobile Number of THE JOURNAL, that of April 9 next, a list of questions will be found on advertising page 47 of this issue. We hope that physicians, both those who use horses and those who use automobiles, will reply in sufficient numbers to make it possible to draw deductions of practical value from the answers. The length of time the automobile has been in use justifies the attempt to compare its *real cost* with that of the horse and to deduce from the experience of many some definite conclusions in regard to the worth of the automobile as equipment, as well as its value as a luxury. It is to ascertain "real cost" and not temporary expense that Questions 17 and 18 have been framed. Answers will be of value somewhat in proportion to the years covered by the figures. The fault with too many statements of expense is that they cover only running expenses and repairs and lose sight of the fact that the car may endure only one or two more years of service. A considerable portion of the original cost, therefore, has to be added to such an expense account. With other cars, however, the outlay for repair and correction of defects has been heavy in the first year, and then the machine is good for several years' excellent service with little necessity for renewal. In such a case it would be unfair to make so high an allowance for depreciation. All these things must be duly considered if dependable deductions are to be made. The information in regard to the yearly income, mileage, etc., is necessary as a basis for comparison, since what one man can afford is no guide to another unless the circumstances of the two be compared. On request these answers will be considered confidential and, if a tabulation is published, the name and address will be omitted. We shall appreciate the cooperation of our readers and we hope that many of them will fill out the blank and mail it to us at once. This is requested for the information of the profession, and the results will be of value in proportion as the response is general.

A Noted Japanese Physician.—The recent death of Dr. I. Ogata, at Osaka, Japan, at the age of 67, removes one of Japan's most eminent men, a Christian statesman of much influence, and a pioneer among Japanese students of Western medicine. He was one of the first to go abroad, studying medicine in Holland. He was appointed court physician by the new imperial government on its accession, and together with his father, who was also a physician, was the founder of the medical department of the Japanese army. He founded a medical college and hospital at Osaka, was one of the founders of the Japanese Red Cross Society, and was active in other directions in the larger affairs of Japan.

Medical News

ALABAMA

Society Meeting.—At the annual meeting of Jefferson County Medical Society in Birmingham, the following officers were elected: President, Dr. George W. Brown, Pratt City; vice-president, Dr. Edgeworth S. Casey; secretary-treasurer, Dr. Charles E. Dowman, and censor, Dr. Thomas D. Parke (reelected), all of Birmingham.

Personal.—Dr. Philip Van B. Speir, Furman, has been elected health officer of Wilcox county, vice Dr. Raphael O. Semmes, Rock West, Camden, deceased.——Dr. Thomas R. Barnes, Russellville, physician to the Foster-Craighton Gould Company at Rockwood, has resigned and Dr. Walter A. Gresham, Russellville, has succeeded him.——Dr. Walter H. Bell, Birmingham, has been made medical director, and Dr. Edmond Prince, assistant surgeon of the Iron Ore Accident and Health Insurance Company.

ARKANSAS

State Society Meeting.—The thirty-third annual session of the Arkansas Medical Society will be held in Little Rock, May 3-6, 1910, under the presidency of Dr. James H. Lenow, Little Rock. The general headquarters will be at the Marion Hotel.

State Board Will Appeal.—Chancellor Martineau, on February 5, is said to have made permanent the temporary injunction which he had issued against the State Board of Medical Examiners, preventing the board from revoking the license of Dr. A. S. McCrary, Little Rock, because he had publicly advertised that he would treat chronic diseases and cancer. The decision declares that part of act 219, passed by the last legislature, is unconstitutional and void. The case will be appealed to the supreme court for a correct decision.

CALIFORNIA

Fined Doctors Appeal.—Drs. Daniel E. Osborn, Frank C. Newton, and J. H. O'Connor, physicians of St. Helena, who refused to pay the new town license tax of $3 a quarter for the right to practice their profession and were fined $10 in each case with the alternative of five days' imprisonment, have been granted a stay of execution to permit the filing of the necessary motions for appeal.

Personal.—Dr. Luther M. Powers has been unanimously reappointed health officer of Los Angeles.——Dr. Guy E. Manning has been reappointed a member of the San Francisco Board of Health.——Dr. Herbert C. Moffitt has been appointed vice-president; and Dr. William C. Vorsanger, secretary, and Drs. Harry M. Sherman and George H. Evans have been elected members of the executive committee of the San Francisco Association for the Study and Prevention of Tuberculosis.

Staff Elected.—At the annual meeting of the Children's Hospital, San Francisco, the following staff was elected: Visiting staff—Drs. Lucy M. F. Wanzer, Harry M. Sherman, Emma Merritt, William E. Hopkins, Charles A. von Hoffman, Beverly MacMonagle, William B. Lewitt, William Kerr, Adelaide Brown, Frances R. Sprague, Edward K. Hopkins, Samuel J. Hunkin, Alice M. Woods, Howard Morrow, and R. Leona Ash; assistant visiting staff—Drs. James T. Watkins, George J. McChesney, Emma K. Willits, Tracy G. Russell, August J. Lartigau, and Frederick Lewitt; anesthetist, Dr. Mary E. Botsford, and assistant anesthetist, Dr. Mary Murphy.

At Variance with the Law.—The State Board of Medical Examiners, through its attorney, has taken a hand in the prosecution of a Chinese doctor, who was arrested two months ago for practicing without a state license and was convicted and fined $100. Appeal was taken. He was again arrested, January 27, charged with having practiced since conviction, and the following morning was arrested for the third time. The defendant claims that he does not practice medicine but merely sells herbs.——John Kellett, Oakland, is said to have been found guilty, February 2, of violating a state law by selling a medicinal preparation, containing more than two grains of opium to the ounce, and fined $100. He was released on bonds, pending an appeal of the case.

Hospital Notes.—The directors of the Southern Pacific Railroad have appropriated $150,000 for a west wing to the company's hospital. The new wing will provide 100 additional beds, and the fourth floor will be devoted to private rooms.——The St. Francis Hospital Company, Eureka, has transferred its business and building to the Sequoia Hospital Company, and the patients have already been moved to their new quarters.——At the annual meeting of Fabiola Hospital Association, Oakland, February 4, it was reported that 1,590 patients had been treated during the year, 1,400 of whom were admitted to the hospital. The total receipts for the year were $93,903.48 and the disbursements were $93,877.13, leaving a balance on hand of $26.86.——Ramona Hospital, San Bernardino, was opened February 1, with Dr. Henry W. Mills as chief of staff.

GEORGIA

Personal.—A patient crazed with liquor attempted to kill Dr. Garnett W. Quillian, an ambulance surgeon of Atlanta, January 29. Dr. Quillian escaped uninjured.——Dr. James M. Guess, Centerville, is reported to be seriously ill.——Dr. R. B. Durrett has been elected physician to the Atlanta city prison, vice Dr. M. C. Martin, who declined to serve.

Fire at Sanitarium.—The bravery of nurses in Park View Sanitarium, a private hospital in Savannah, probably prevented serious casualty February 7. A wing of the hospital caught fire, the 18 patients were removed, and after their removal the nurses fought the fire with the apparatus in the hospital until the arrival of the fire department.

IOWA

Visiting Nurse for Dubuque.—A Visiting Nurse Association was organized at Dubuque, January 27. Dr. James R. Guthrie presided at the meeting, and the address was delivered by Miss Harriett Fulmer, head of the Visiting Nurses Association of Chicago.

Buchanan County Physicians Elect.—The annual meeting of Buchanan County Medical Society was held in Independence, February 3, and the following officers were elected: Dr. George W. Tapper, Rowley, president; Dr. Hiram H. Hunt, Hazleton, vice-president; Dr. Benjamin B. Sells, Independence, secretary-treasurer, and Dr. Joseph C. Ohlmacher, Independence, censor (reelected).

Personal.—Dr. George W. Coit, Missouri Valley, is seriously ill with pneumonia.——Dr. Jennie G. Ghrist, Ames, and Dr. and Mrs. David W. Smouse, Des Moines, sailed from San Francisco, February 5, on a trip around the world.——Dr. Henry J. Prentiss has been appointed a member of the Greater University Committee of the State University, Iowa City.——Dr. George E. Crawford, Cedar Rapids, who was operated on last month, is reported to be convalescent.——Dr. Norman E. Mighell, Marshalltown, who has been seriously ill with septicemia, due to an operation wound, is reported to be convalescent.——Dr. Everett E. Richardson, Webster City, has been appointed a member of the State Board of Health, vice Dr. Alexander M. Linn, Des Moines.——Dr. Joseph J. Flannery, Des Moines, is reported to be seriously ill with nephritis in Mercy Hospital.——Dr. Charles C. Shope, Des Moines, has been appointed physician of Polk county.——Dr. Charles L. Marston, Mason City, representative from Cerro Gordo county, while making a professional call near Plymouth in a severe snow storm, was almost overcome with the cold. One foot was severely frozen.——Dr. Edward L. Martindale has been appointed postmaster of Clinton, and will assume the duties of his office April 1.——Dr. Mamie A. Coveny, Clinton, is reported to be ill with appendicitis in Maryville, Mo.——Dr. Louis A. Thomas, formerly secretary of the State Board of Health, was made acting secretary of the Des Moines Board of Health, February 4.——Dr. Mathew N. Voldeng, superintendent of the State Hospital, Cherokee, was designated by the board of control for another term of four years, February 5.

MARYLAND

Registration of Midwives.—Dr. Thomas A. Ashby has introduced a bill in the House of Delegates providing for the registration of midwives, which has been approved by a committee of the Medical and Chirurgical Faculty of Maryland.

Work for the Insane.—Patients at the Shepherd and Enoch Pratt Hospital for the Insane have made a motor boat which is ready for launching. The patients are also instructed in weaving, basket, metal and leather work, bookbinding, needlework and drawing. Several patients have shown distinct mental improvement under the stimulus of occupation.

Personal.—Dr. John H. Wade, Boonsboro, has been nominated as fish commissioner of the western shore.——Dr. Frank T. Turner, Black Horse, has been ill for several weeks with rheumatism.——Dr. George Wells, Annapolis, clerk of the Anne Arundel County Circuit Court, who has been ill for a month, has recovered.——Dr. Thomas Z. Offutt, Granite, is said to be ill with pneumonia.

Optometry Board.—Dr. Thomas A. Ashby has introduced in the house of delegates a bill to create a state board of examination in optometry. It provides for a board of five to be appointed by the governor, and authorized, after examination, to issue certificates to practice optometry. The board has power to revoke licenses on conviction of crime, habitual drunkenness and incompetency.

To Improve Sanitary Conditions.—A bill has been prepared by the Confederated Improvement Associations of Baltimore county, designed to better sanitary conditions in the state. By it all residents are required to keep their premises in sanitary condition, especially with reference to the contamination of streams. Sanitary officers will be provided to enforce the law, and failure to comply with their orders will render the offender liable to a fine of from $10 to $50.

State Sanatorium.—Many members of the state legislature visited the Maryland State Tuberculosis Sanatorium, Sabillasville, to inspect the condition and needs of the institution. The legislature will be asked to appropriate $100,000 for maintenance of the institution and $100,000 for buildings. There are now 200 patients. The cost of maintenance of patients in the institution is 95 cents per day each, or $6.65 per week, which compares favorably with the average, $10.47.

State Care of the Insane.—A meeting was held in the chamber of the House of Delegates, February 9, to discuss state care of the insane. The governor presided. The discussion was opened by Dr. Hugh H. Young, president of the lunacy commission. Dr. Albert W. Ferris of the New York Lunacy Commission, spoke on "Economics in the State Care of the Insane;" Mr. William L. Barbury, Baltimore, on the "State Care from the Viewpoint of the Taxpayer;" Dr. Joshua W. Hering, Westminster, comptroller of the state, on "Financial Questions Involved in State Care;" Dr. Edward M. Brush, superintendent of the Shepherd and Enoch Pratt Hospital on the "Great Possibilities of Scientific Treatment Under State Care," and Attorney General Isaac L. Straus on the "Duty of the State to Provide for the Dependent Insane."

Baltimore

Violators of Pure Food Law Fined.—Two drug firms were found guilty on January 29 of violating the pure food and drug law by sending out misbranded laudanum and headache tablets, and fined.

Concert for Widows and Orphans.—Concerts were given by the Ladies Auxiliary of the Medical and Chirurgical Faculty of Maryland, February 2 and 3, in Medical Hall, for the benefit of the widows and orphans of physicians.

Personal.—Dr. George L. Brown has been appointed assistant research worker of the Phipps Tuberculosis Dispensary. ——Dr. Max Kumstler, accused of selling cocain in violation of the ordinance was acquitted in the criminal court, February 2.

Ask Further Appropriation.—The State Board of Health has decided to ask the hygiene commission to recommend an increase in the appropriation for the relief of tuberculosis from $5,000 to $10,000, and also to ask the legislature to make provision for the publication of a monthly bulletin.

Book and Journal Club Meet.—The annual meeting of the Book and Journal Club of the Medical and Chirurgical Faculty of Maryland was held February 10. There are 83 members, each of whom pays $5 dues, this money being used to increase the library. The subscriptions and balance amount to $518. Historical work is to be fostered by the club; three meetings have been arranged for this season.

Report of the Eudowood Hospital.—The annual report of the Eudowood Hospital for Consumptives shows that 237 patients were under treatment during the year, and that the cost of each patient was 84 1/10 cents per day. The expenses were $31,000, or $10,000 in excess of the receipts. Of the 160 patients discharged from the hospital during the year, 66 per cent. are reported well with full earning capacity, and 77 per cent. well and doing work of some sort.

The Crusade Against Consumption.—A billboard crusade has been commenced against consumption by the Maryland Association for the Prevention and Relief of Tuberculosis. Two hundred and fifty posters, seven by nine feet are to be placed around the city in conspicuous places. These are illustrated, and contain the following admonition:

Bad air, overwork, late hours, intemperance, and other excesses lead to consumption.
Fresh air, good food, sunshine and life in the country cure it.
Phthisis can be prevented.
A careless consumptive is dangerous to his family.

Hospital News.—The Hospital for the Women of Maryland was reopened February 12, with a public reception. It has been completely remodeled and enlarged at a cost of $80,000, and now has provision for 75 patients.——Performances were given in two theaters in Baltimore, February 7, one for the benefit of the Eye, Ear and Throat Charity Hospital, and the other for the benefit of the Mercy Hospital, connected with the College of Physicians and Surgeons.——At the annual meeting of the trustees of Johns Hopkins Hospital, February 8, the superintendent reported that during the year 4,782 patients were admitted to the hospital, and 4,776 were discharged. There were 309 patients in the hospital Feb. 1, 1910. The average mortality for the year was 5.62 per cent. of the cases treated, and during the previous year, it was 5.35 per cent.——A campaign has been started to raise a fund of $100,000 for buildings for the South Baltimore General Hospital, to be erected on the site of the South Baltimore Eye, Ear, Nose and Throat Hospital.——Dr. Philip Morrill reports that the Sydenham City Hospital for Contagious Diseases is unable to handle all cases requiring treatment there. Only 28 patients can be accommodated, and provision is made for only diphtheria and scarlet fever.——By the will of the late Mrs. Gilman, widow of the late president emeritus of Johns Hopkins University, $5,000 is left in trust to the university for the erection of a memorial to her husband.

MASSACHUSETTS

Meeting of Boards of Health.—At the annual meeting of the Massachusetts Association of Boards of Health, held in Boston, January 27, the following officers were reelected: Dr. Henry P. Walcott, Cambridge, president; Dr. Samuel H. Durgin, Boston, and C. B. Chapin, Providence, vice-presidents; Dr. James C. Coffee, Worcester, secretary, and J. B. Field, Lowell, treasurer. Dr. David D. Brough advocated registration for the purpose of control of laryngeal and pulmonary tuberculosis. Dr. Mark W. Richardson read a paper on "Ophthalmia Neonatorum," and Simon C. Keith, Jr., gave an address on an improved form of bubbling drinking fountains.

Money for Charities.—By the will of Mrs. H. M. Smith, Somerville, $5,000 is bequeathed to the Eliot Hospital, Manchester, N. H.; $20,000 to the same institution to build a nurses' home, and the income of $15,000 for the support of free beds.——By the distribution of the residue of the estate of George William Boyd, Boston, the Boston Floating Hospital receives $5,000; the Boston Dispensary, $1,000; Carney Hospital, South Boston, $5,000; the Free Hospital for Women, $1,000; Infants' Hospital, $1,000; Massachusetts Charitable Eye and Ear Infirmary, $5,000; Massachusetts General Hospital, $2,000, and the New England Deaconess' Association, for the maintenance of a free bed in the hospital, $5,000.—— Boston Floating Hospital receives a bequest of $1,000 from the estate of Marion F. Lord, Wells, Maine, and the Newton Hospital receives a similar amount.

MINNESOTA

Personal.—The Minneapolis, St. Paul and Sault Ste. Marie Railway, which has recently taken over the Wisconsin Central Railroad, has reorganized its surgical department and has placed in charge Dr. John H. Rishmiller, Minneapolis, as chief surgeon.——Dr. Henry M. Bracken, St. Paul, has been reappointed a member of the State Board of Health, and the board has reelected him its secretary.

Medical Society Elections.—At the annual meeting of Washington County Medical Society, Dr. Wade R. Humphrey, Stillwater, was elected president; Drs. George H. Burfield, Afton, and Demeter Kalinoff, Stillwater, vice-presidents; Dr. Frank G. Landeen, Stillwater, secretary-treasurer; Dr. Thomas C. Clark, Stillwater, censor; and Dr. Ernest E. Wells, Stillwater, delegate to the state society.——At the annual meeting of Blue Earth County Medical Society, Dr. Edward W. Benham, Mankato, was elected president; Dr. Henry B. Grimes, Lake Crystal, vice-president; Dr. Thomas C. Kelly, Mankato, secretary; Dr. Lida Osborn, Mankato, treasurer; Dr. John H. James, Mankato, delegate to the state society, and Dr. John Williams, Lake Crystal, alternate.—— St. Louis County Medical Society, at its annual meeting in Duluth, elected the following officers: President, Dr. Robert Graham, Duluth; Drs. Nicholas L. Linneman, Duluth, and Charles W. Bray, Biwabik, vice-presidents; Dr. Frank A. Grawn, Duluth, secretary-treasurer; Drs. Samuel H. Boyer, Frank A. Grawn, and Charles F. McComb, all of Duluth, delegates to the state society, and Drs. John B. Weston, Asher C. Taylor, and Edward L. Tuohy, all of Duluth, alternates, and Drs. Theodore L. Chapman, Charles A. Stewart,

and William H. Magie, all of Duluth, censors.——At the thirtieth annual meeting of the Minnesota Valley Medical Association, held in Mankato, the following officers were elected: President, Dr. John W. Andrews; vice-presidents, Drs. Lida Osborn and Carl J. Holman; secretary, Dr. Adolph G. Liedloff (reelected), all of Mankato, and treasurer, Dr. George F. Merritt, St. Peter.——At the annual meeting of the Red River Valley Medical Association, held in Crookston, the following officers were elected: President, Dr. Theodore Bratrud, Warren; vice-president, Dr. George A. Morley, Crookston; secretary-treasurer, Dr. Henry E. Nelson, Crookston; censors, Drs. Henry C. Stuhr, Argyle; Jacob S. Kjelland, Crookston, and Ole H. Olson, Erskine; delegate to the state society, Dr. Charles E. Dampier, Crookston, and alternate, Dr. George S. Wattam, Warren.

MISSOURI

St. Louis

Donation to Endowment Fund.—The St. Louis Surgical Society has donated $1,000 to the Elisha Hall Gregory Endowment Fund of the St. Louis Library Association.

Chiropractic Acquitted.—W. J. Wundracek, charged with practicing medicine without a license and prosecuted by the State Board of Health, is said to have been acquitted January 20, the successful contention of the defense being that chiropractors use no medicine and therefore do not come within the Missouri statutes regarding unlicensed physicians.

NEBRASKA

Change Date of State Society Meeting.—The trustees of the Nebraska State Medical Association have changed the date of the meeting to May 10-12.

Medical Corps Banquet.—The Lincoln Hospital Corps, Nebraska National Guard, gave a banquet, January 27, at which the governor and adjutant general were guests of honor.

Consumption Camp Moves.—By order of the State Board of Health, The Double Red Cross Consumption Camp (designated state sanatorium), Lincoln, of which Dr. Julius H. Tyndale is medical director, has been moved to grounds adjoining Sunlight Sanatorium to the north on Garfield street.

Personal.—Dr. Henry J. Lehnhoff, Lincoln, has sailed for Europe.——Dr. Claude C. Sackett, Laurel, was operated on in Sioux City, Iowa, for appendicitis, recently.——Drs. Henry B. Lemere, Frederick W. Lake and Frank E. Coulter, the medical advisory board of Douglas County Hospital, Omaha, have resigned.——Dr. Harold Gifford has been persuaded to give up his intention of resigning as associate dean of the College of Medicine of the University of Nebraska.

Medical Societies.—Elkhorn Valley Medical Association, at its fourteenth annual meeting, held in Norfolk, January 19, elected the following officers: President, Dr. Armenag B. Tashjean, Norfolk; vice-presidents, Drs. Czar C. Johnson, Creighton, and William R. Peters, Stanton; secretary, Dr. J. H. Mackay, Norfolk, and treasurer, Dr. Walter H. Pilger, Norfolk.——Madison County Medical Association, at its annual meeting in Norfolk, elected the following officers: Dr. W. H. H. Hagey, Norfolk, president; Dr. Walter H. Pilger, Norfolk, secretary-treasurer; Dr. J. H. Mackay, Norfolk, delegate to the state association, and Drs. Francis A. Long, Madison, Francis A. Bryant, Norfolk, and Frank L. Frink, Newman Grove, censors.——Clay County Medical Association, at its annual meeting, held in Clay Center, January 14, elected Dr. J. Oscar Latta, Clay Center, president; Dr. Peter G. Grimm, Edgar, vice-president, and Dr. Adam R. Ray, Fairfield, secretary-treasurer.

NEW YORK

Medical Societies.—On January 20, the Lyons Medical Society was organized with the following officers: President, Dr. Myron E. Carmer; vice-president, Dr. Andrew F. Sheldon; secretary, Dr. D. DeForest Cole, and treasurer, Dr. Major A. Veeder.——At the annual meeting of the Associated Physicians of Long Island, January 29, the following officers were elected: President, Dr. Thomas R. French, Brooklyn; vice-presidents, Drs. Frank Overton, Patchogue; William B. Brinsmade, Brooklyn, and George K. Meynen, Jamaica; secretary, Dr. James C. Hancock, Brooklyn, and treasurer, Dr. Charles B. Bacon, Blackwell's Island.

Death Rate Decreases.—Dr. Eugene H. Porter, State Commissioner of Health, reports that during the year 1909 there were 139,783 deaths; based on an estimated population of 8,699,643 this shows the rate per thousand of population to have been 16.1 as compared with 16.3 for 1908. There were 200,865 births reported which is 2,294 less than the number reported during 1908. The drop in the birth rate is attributed to the decrease in the number of marriages; there were only about 80,000 as compared with 92,421 for 1908. The decrease in the number of marriages is attributed to the new marriage license law which went into effect in 1909.

To Prevent Lunacy.—An amendment to the Greater New York Charter has been introduced into the Legislature in relation to the treatment of public intoxication and inebriety. Dr. Albert W. Ferris, president of the State Commission in Lunacy, states that next to heredity, alcoholic intoxicants are the most potent cause of insanity. Rosanoff has shown that in the State of New York 28.9 per cent. of the male patients owe their insanity to alcohol. In a study of 961 cases of insanity Dr. Mabon of the Manhattan State Hospital found that alcohol alone was the cause of mental impairment in 40 per cent. of the men and in more than 25 per cent. of the women. This made it obvious that the state, or at least large cities, should make special efforts to provide institutions for the treatment of inebriety. Such institutions would become the centers for the dissemination of truths regarding the great dangers of alcoholism.

Regulation of Medical Expert Testimony.—This bill was drawn up by joint committees of the New York State Bar Association, the Medical Society of the State of New York, the Homeopathic Medical Society of the State, the New York Academy of Medicine and the Society of Medical Jurisprudence. It provides that the judges of the appellate division shall appoint not less than 10 nor more than 120 physicians in each judicial district, any of whom may be called as medical or surgical witnesses by the trial court or by any party to any civil or criminal action in any of the courts of this state, and when so called shall testify and be subject to full examination and cross-examination as are other witnesses. Such examination is to include an examination as to their competency. Any designation may at any time be revoked without notice or cause shown, and any vacancy may at any time be filled by the judges sitting in the appellate division. When so directed by the trial court, witnesses thus called shall receive for their services and attendance only such sums as the trial judge may allow, to be at once paid by the treasurer or other fiscal officer of the county in which the trial is had. The act declares that it shall not be construed as limiting the rights of parties to call other medical expert witnesses as heretofore.

New York City

To Prevent Crime.—A plan has been worked out to erect a hospital where children from the Childrens' Court may be examined for mental and physical defects and treated either medically or surgically as the case demands. This institution is the result of the belief that many mental and moral infirmities are the result of physical defects and an expert investigation will be made of all cases of children under 16 years of age who come before the Childrens' Court. The cost it is said will amount to $1,000,000 and Mrs. W. K. Vanderbilt will contribute nearly the entire amount.

Decision in Favor of Pharmacy Board.—An action was recently brought against a department store to collect penalties of $25,000 each for the sale of iodin, camphor and arnica, which were sold to a representative of the State Board of Pharmacy by a clerk in the absence of the registered pharmacist in charge. The court has ruled that the drugs in question are medicines within the meaning of the pharmacy law prohibiting the sale of medicines or poisons except under the supervision of a licensed pharmacist. The court also holds that the right of the state to regulate the sale of drugs and medicines is not confined to poisons but even covers household remedies, which are harmless if properly prepared.

Staff for New Dispensary.—The new dispensary of the German Hospital, Brooklyn, was opened January 12. The following is the medical staff of the dispensary: Dr. George Burkard, gynecology; Dr. Otto Niedner, medicine; Drs. Carl Fulda and Russell S. Fowler, surgery; Dr. Robert L. Moorhead, ear, nose and throat; Dr. George Mueller, eye; and Drs. Henry F. Adams and Henry E. B. Meyer, *x*-ray examinations.

Plan Hungarian Hospital.—A meeting of the Hungarian Hospital Association was held recently where it was decided to collect funds all over the country for the purpose of erecting a modern hospital in this city. Among the officers of the association are Dr. Arpad G. Gerster and Prof. M. E. Pupin of Columbia University.

The Year at Stony Wold.—At the annual meeting of the trustees of Stony Wold Sanatorium it was announced that the institution had just completed its most successful year.

Not only was the highest percentage of cures attained but the maintenance of each patient was reduced 16 cents a day. Bequests amounting to $20,000 were announced, $5,000 from the estate of Miss Martha Potter, $5,000 from the estate of Mrs. Frederick R. Halsey, and $10,000 left by Mrs. Gardner Wetherbee. The completion of the $75,000 chapel, the gift of Miss Blanche Potter, was announced. The auxiliaries increased the annual income by $26,200. An open-air school has been established for girls ranging from twelve to fifteen years of age and for boys under ten.

Gifts to Hospitals.—Mount Sinai Hospital has refused to accede to the conditions of the will of Louis A. Heinsheimer which was filed in January, 1909, and will not be a beneficiary of the bequest of $1,000,000 left to Hebrew Charities. The object of the testator was that six or more of the Hebrew Charities should form a consolidation for the collection and distribution of funds. The Hebrew Orphan Asylum also refused to combine with the other institutions.——Mrs. Anna Woerishoffer has given $100,000 to the German Hospital and Dispensary for a children's division on condition that it shall be begun within two years and shall be named after Dr. Abraham Jacobi.——In honor of his seventieth birthday August Zinsser has received $5,000 from ten men and one woman with which to endow a bed in the hospital to bear his name.——The will of John Stemme includes the following bequests: German Hospital and Dispensary, $10,000; and St. Mark's Hospital, St. Francis Hospital, Montefiore Home, Mount Sinai Hospital, German Poliklinik, Isabella Home, and German Hospital Society of Brooklyn, $5,000 each.——The will of Maria C. Tailer bequeathes $25,000 to the New York University as a memorial endowment fund to William H. Tailer for the benefit of the dispensary and medical college. This is the first gift received for the endowment of the free clinic. An endowment of $100,000 is needed in order to give an income sufficient to supply the drugs given to the patients.——Seney Hospital is twenty-two years old and 1909 was its most prosperous year, 10,610 patients having been cared for. Of the 51,580 days of treatment given in the wards and rooms 31,800 were free. Of the patients 238 died. From all sources the hospital received during the year $115,351.95, an increase of $12,648.15 over 1908. The endowment fund was increased by $48,276.65, bringing it up to a total of $814,241.01.

NEW HAMPSHIRE

Personal.—Dr. Wallis D. Walker, Portsmouth, has been appointed medical referee of Rockingham county, vice Dr. Arthur J. Lance, Portsmouth, resigned.

Society Meeting.—The Portsmouth Medical Society held its annual meeting, February 4, and elected the following officers: President, Dr. Herbert L. Taylor; secretary, Dr. John H. Neal; treasurer, Dr. Mark E. Scott; and executive committee, Drs. John J. Berry, Fred S. Towle and Arthur C. Heffenger.

Sanatorium Staff Reorganized.—The staff of Pembroke Sanatorium for the Treatment of Tuberculosis was reorganized by the appointment of the following members: Drs. Frank W. Grafton, Oscar B. Gilbert, Ralph E. Gallinger, Pearl T. Haskell, Sibley G. Morrill, William R. Varick, Arthur K. Day, Marion L. Bugbee, Charles P. Bancroft, Charles H. Cook, Chauncey Adams, W. Preston Beauclerk, Robert J. Graves and Henry H. Amsden, all of Concord, and Clarence E. Butterfield, Suncook. The sanatorium has recently received a donation of $2,300.

NORTH CAROLINA

Antituberculosis Association Organized.—The Mecklenburg County Antituberculosis Association was organized at Charlotte February 1. The meeting was presided over by Dr. Andrew J. Crowell, Charlotte, and Dr. Charles A. Julian, Thomasville, secretary of the state organization, made an address. Dr. Isaac W. Faison, Charlotte, was elected president; Mr. C. W. Tillett, vice-president, and John Q. Myers, Charlotte, secretary-treasurer.

Personal.—Dr. William W. McKenzie, Salisbury, was thrown from his carriage in a runaway accident February 1, fracturing his leg.——Dr. Lewis B. McBrayer, Asheville, has been elected city physician and a member of the city board of health, vice Dr. Carl V. Reynolds, resigned.——Dr. Francis J. Clemenger, Asheville, who has recently returned from abroad, and Dr. William L. Dunn have been elected members of the Asheville Board of Health.

Hospital Notes.—Dr. Robert S. Carroll has made a contract for a new fifty-room building as an addition to his sanatorium at Asheville.——The trustees of the State Normal College for Women, Greensboro, have let the contract for the new infirmary authorized by the last legislature, which appropriated $50,000 for this purpose.——Maxton Hospital has been incorporated at Maxton by Drs. Arthur B. Croom, James D. Croom, and Arthur B. Croom, Jr., with a capital stock of $50,000.

State Sanatorium.—The State Sanatorium for Tuberculosis, at Montrose, which has been closed for several months on account of making additions, has again been opened for the reception of patients. The institution, for which an appropriation of $30,000 and a grant of 1,000 acres of land was made, is situated on a long sandhill amid the pines, and with the new building, sewage system, water works, etc., is in excellent condition for the work. A charge of one dollar a day is made for each patient. This covers the expense of nursing, board, medicine and lodging.

OHIO

Hospital to be Reopened.—The Good Samaritan Hospital, Sandusky, which was closed in 1893, is now being overhauled, and will be ready for occupancy about March 1.

State Sanatorium Established.—The Mount Vernon State Tuberculosis Hospital was formally taken over by the state authorities, January 8. At present the institution can accommodate about fifty.

Infant Asylum Annex Dedicated.—The new addition to St. Ann's Infant Asylum and Maternity Hospital, Cleveland, was dedicated with appropriate ceremonies by Bishop Farrelly, February 1. The building, which cost $50,000 and doubles the capacity of the institution, was thrown open to the public all day. In the afternoon a formal reception was held.

For Tuberculosis Exhibit.—Dr. Charles O. Probst, secretary of the Ohio State Board of Health, has prepared a bill which will shortly be brought before the general assembly asking for an appropriation of $10,000 to defray the expenses of a traveling antituberculosis exhibit. The board intends to send the exhibit from town to town accompanied by experts. Only those cities and towns will be visited that have not permanent exhibits.

Personal.—Dr. John W. Clemmer has been elected health officer of Columbus.——Dr. Thomas M. Sabin has been elected president, and Dr. Frederick K. Smith, secretary of the staff of the Warren City Hospital.——Dr. Henry C. Evans has been appointed physician at the Carnegie Steel Company in the Youngstown district, vice Dr. George S. Peck, resigned.——Dr. Joseph D. Ely, Toledo, announces that he will retire from general practice, April 21. After a period of rest he expects to take up special work.

Coming State Association Meeting.—The Academy of Medicine of Toledo and Lucas County has appointed the following committee to make the arrangements for the coming meeting of the Ohio State Medical Association: Drs. Charles N. Smith, George L. Chapman, Jeremiah Metzger, William W. Coldham, Homer H. Heath, Clarence D. Selby, John A. Wright and George M. Todd.——The Business Men's Club of Toledo will keep open house for the benefit of all physicians in attendance at the meeting of the association, which will be held in that city in May.

Cincinnati

Personal.—Dr. Robert W. Stewart has been elected chairman of the board of trustees of the University of Cincinnati.——Dr. Charles S. Rockhill has been appointed physician to the Branch Hospital for Consumptives, vice Dr. Benjamin F. Lyle.——Dr. Frances M. Hollingshead has been appointed clinical assistant in pediatrics in the Medical Department of the University of Cincinnati, vice Dr. Alfred Friedlander, resigned, and Dr. Jesse Southgate has been appointed clinical assistant in ophthalmology.

OKLAHOMA

Central Society Meets.—At the fifteenth annual meeting of the Central Oklahoma Medical Association, held in Enid, January 18, the following officers were elected: President, Dr. Arthur B. Cullum, Hennessey; vice-presidents, Drs. Fred H. Clark, El Reno, and Mahlon A. Kelso, Enid; and secretary-treasurer, Dr. Edwin D. Ebright, Enid.

Antituberculosis Association Organized.—The Oklahoma State Association for the Prevention and Cure of Tuberculosis, with headquarters at Enid, was granted a state charter, January 11. The directors are Dr. Franklyn P. Davis, Enid, secretary of the State Board of Medical Examiners, H. B. Shields, Chester Harper, and A. E. Sale, all of Enid. At the meeting for organization, the following officers were elected:

Dr. Joseph M. Postelle, Oklahoma, president; Drs. Eugene O. Barker, Guthrie; M. D. Read, Weatherford; George M. Ransom, Muskogee; G. W. Phillips, Paul's Valley, and W. G. Bradford, Mangum, vice-presidents; and Mrs. M. F. Jones, Chickasha, secretary-treasurer.

PENNSYLVANIA

Annual Elections.—At the annual meeting of the Philadelphia Academy of Surgery, the following officers were elected: President, Dr. Robert G. LeConte; vice-presidents, Drs. Gwilym G. Davis and John H. Gibbon; secretary, Dr. Charles F. Mitchell; treasurer, Dr. James P. Hutchison; and recorder, Dr. John H. Jopson.——At the annual meeting of the Philadelphia Obstetrical Society, the following officers were elected to serve for 1910: President, Dr. Edward P. Davis; vice-presidents, Drs. William R. Nicholson and John H. Girvin; secretary, Dr. Frank C. Hammond; treasurer, Dr. Charles S. Barnes; and curator, Dr. Charles C. Norris.——At the quarterly meeting and dinner of the Philadelphia Medico-Legal Society, January 24, the following officers were elected: President, Dr. Samuel P. Gerhard; vice-presidents, Drs. Lambert Ott and Clarence Loeb; secretary, Dr. William T. Hamilton; treasurer, Dr. George M. D. Peltz; censors, Drs. Francis J. Kelly, James Wolfe and Dr. Louis D. Bauer.

Philadelphia

New Chair at the University.—A gift of $100,000 has been made to the university to endow a chair in the medical school. The name of the donor and the nature of the chair endowed will be announced on University Day, February 22.

Public Lectures at the College of Physicians.—The College of Physicians announces a series of public lectures on Great Doctors and Achievements in Medical Research. The first lecture on "The Life and Times of William Harvey, the Discoverer of the Circulation of the Blood," was given by Dr. S. Weir Mitchell, in the College Building, February 16.

Antituberculosis Society.—The directors of the Pennsylvania Society for the Prevention of Tuberculosis, February 9, arranged for the immediate publication of *The Fresh-Air Magazine*. Dr. Howard S. Anders, chairman of the legislative committee, read a report on street cleaning which placed Philadelphia in a very unfavorable light. The data of this report were collected from twelve cities.

Colleagues Honor Dr. Flick.—Dr. Lawrence F. Flick, who has resigned from the Phipps Institute, was the guest of honor at a dinner at the University Club, February 2. The dinner was attended by all the members of the staff of the institute and by officers of the new and old régime. Dr. Flick was presented with a massive silver loving-cup, bearing the engraved autographs of the members of the staff.

New Southeast Branch.—Physicians of the southeastern section of the city have for several years been striving to enroll into the County Medical Society every eligible practitioner, and the outcome of their efforts is announced in the first meeting and the election of the following officers: Chairman, Dr. Max Staller; clerk, Dr. Maurice B. Cooperman, and associate vice-president of the County Medical Society, Dr. Aaron Brav.

New Milk Law.—February 5, Dr. Joseph S. Neff, director of Health and Charities, notified the milk trade that the milk act passed by the last legislature for the greater purity of the city's milk supply goes into effect February 7, and that dealers must at once take out licenses issued by the bureau of health. The penalty of dealing in milk without obtaining a license is a fine of $50, or imprisonment of not more than 60 days.

Gift to College of Physicians.—The College of Physicians' new building has been relieved of debt by the gift of $75,000 from an unknown donor through Dr. S. Weir Mitchell. This announcement was made at the meeting of the college, February 2, and the following letter read from the donor: "I have the great pleasure of giving to the College of Physicians of Philadelphia $75,000 to relieve it from debt and to leave it free to its honorable usefulness."

Elections of Officers.—At the January meeting of the Lebanon Hospital Medical Society, the following officers were elected: President, Dr. Alfred Heineberg; vice-president, Dr. Benjamin L. Singer; secretary, Dr. Abraham D. Halperen; treasurer, Dr. Moris V. Leof, and librarian, Dr. E. J. Goldring.——At the annual meeting of the Samaritan Medical Society, January 29, the following officers were elected: President, Dr. G. Morton Illman; vice-presidents, Drs. Charles S. Barnes and John Leedom; and secretary and treasurer, Dr. Jesse O. Arnold.

Meeting of State's Society Committee of Inquiry.—The committee appointed by the Pennsylvania State Society, at its last meeting to inquire into the charges of mismanagement of hospitals receiving state aid, met February 4, at the College of Physicians to receive suggestions from physicians and others of the best means to correct the abuse, of which complaint was made. Dr. William L. Estes, South Bethlehem, chairman of the meeting, was called away at the beginning of the session, and Dr. H. G. McCormick, Williamsport, presided. The other members of the committee were: Drs. John B. Roberts, Philadelphia; William T. Sharpless, West Chester, and Thomas D. Davis, Pittsburg. There was a long discussion, but no definite conclusion was reached.

New Location for Free Library.—Negotiations have been closed for the leasing to the Central Branch of the Free Library, of the old building of the College of Physicians. The lease is for five years, with the privilege of annual renewal until the great central edifice of the city's Free Library System, to be erected on the Parkway between City Hall and Fairmount, is ready for occupancy. The importance of the foregoing statement to general practitioners in the outlying districts of the city is in the legal agreement just made between the Philadelphia County Medical Society and the trustees of the Free Library System by which the old College of Physicans' building ultimately becomes the starting and distributing center for a medical reference section for all physicians in the city through the forty or more branch libraries.

SOUTH DAKOTA

Societies Elect Officers.—At the annual meeting of Aberdeen Medical Society, held January 25, Dr. Daniel Geib, Groton, was elected president; Dr. Burton A. Adams, Bristol, vice-president; Dr. Jesse B. Whiteside, Aberdeen, secretary; Dr. Herman R. Gundermann, Selby, treasurer; and Dr. James D. Jones, Groton, censor (reelected).——At the annual meeting of the Yankton District Medical Association, held in Yankton, January 7, the following officers were elected: President, Dr. James L. Stewart, Spearfish; vice-president, Dr. Edward T. Anderson, Platte; secretary-treasurer, Dr. Leon F. Beall, Irene; censor, Dr. Herman J. G. Koobs, Scotland; and delegates to the state association, Drs. F. Arthur Swezey, Wakonda, and Silas M. Hohf, Yankton.

TENNESSEE

Hospital News.—The organization of the Boyd Tuberculosis Sanatorium Association of Knoxville was perfected January 8. Dr. Henry P. Coile was elected president, and among the incorporators are Drs. William R. Cochran and Henry T. Fisher.——The Armstrong Hospital, Bristol, has been sold to Drs. William R. Rodgers, Nathan H. Reeve, James H. Delaney and Joseph S. Bachman. The institution will accommodate thirty patients.

Societies Elects Officers.—At the annual meeting of the Memphis and Shelby County Medical Society, held December 21, Dr. Ernest C. Blackburn was elected president; Dr. J. Wesley Price, vice-president, and Dr. Buford N. Dunavant, secretary-treasurer, all of Memphis.——At the annual meeting of Knox County Medical Society, held in Knoxville, the following officers were elected: President, Dr. John P. Tillery; vice-president, Dr. William Bowen; secretary-treasurer, Dr. Leon L. Sheddan, and censors, Drs. Samuel D. Acuff and William S. Austin, all of Knoxville.——Hamilton County Medical Society, at its annual meeting in Chattanooga, elected Dr. William A. Duncan, president; Dr. James H. Atlee, vice-president (reelected), and Dr. Hiller P. Larimore, secretary-treasurer, all of Chattanooga.

Personal.—Dr. Walter J. Miller, Johnson City, has gone to Rochester, Minn., for operation and treatment.——Dr. Henry P. Dulaney, Blountville, has been appointed assistant surgeon of the Mountain Branch of the National Soldiers' Home, Johnson City.——Dr. W. Frank Glenn has been elected chairman of the Nashville Board of Health.——Dr. James B. Murfree, Murfreesboro, is reported to be seriously ill.——Dr. W. Battle Malone, Memphis, has been appointed one of the trustees of the proposed new city hospital for the care of communicable diseases.——Dr. Henry A. Smith has been reelected city physician of Knoxville.——Dr. Philander D. Sims has been reappointed city physician of Chattanooga.——Dr. Max Goltman has succeeded Dr. James L. Andrews as president of the Memphis Board of Health.

TEXAS

Gifts to Texas Charities.—Mrs. Russell Sage has given $25,000 to a hospital in El Paso, $25,000 to a tuberculosis sanatorium near Brackettville, $10,000 to a sanatorium at Boerne, and $15,000 for a hospital for consumptives at Pecos.

Favor Postgraduate Work.—At a meeting of physicians of Dallas, January 1, a plan was outlined for the establishment of a postgraduate medical course. The committee in charge is composed of Drs. Joseph H. Reuss, John M. Neel, Oscar M. Marchman, Mathew M. Smith and Samuel E. Milliken.

Sanitary Code in Force.—The State Sanitary Health Code, recently promulgated by the State Board of Health, became operative February 1. The code provides for the proper registration and record of births and deaths, and the violation of any of the provisions is punishable by a fine of not less than $10 nor more than $1,000.

Personal.—Dr. Thomas A. Pope, postmaster of Cameron, was run down by an automobile, January 11, and painfully injured.——Dr. Robert J. Rowe has resigned as one of the assistant physicians of the North Texas Hospital for the Insane, Terrell, and Dr. Paul Shepherd, McCulloch, has been elected his successor.——Dr. Philip O. Erwin, Big Sandy, was stricken with cerebral hemorrhage, January 9.——Dr. William C. Baird, Beaumont, charged with practicing medicine without first having obtained a certificate, is said to have been found not guilty by a jury, February 2.

Medical Society Meetings.—At the recent meeting of the Bexar County Medical Society, held in San Antonio, the following officers were elected: President, Dr. William E. Luter; vice-president, Dr. James P. Oldham; secretary, Dr. Lewis Krams Beck (reelected); treasurer, Dr. Evarts V. De Pew (reelected), and delegates to the state association, Drs. John H. Burleson and Franklin E. Young, all of San Antonio.——Port Arthur Medical Society was organized February 2, Dr. Charles F. Seafers being elected president; Dr. William S. Winter, vice-president, and Dr. L. F. Bland, secretary-treasurer.——Tarrant County Medical Society, at its annual meeting, Dec. 6, 1909, elected the following officers: President, Dr. William Rounds, Fort Worth; vice-president, Dr. William H. Davis, Arlington; secretary, Dr. Harold L. Warwick, Fort Worth; treasurer, Dr. William R. Thompson, Fort Worth; censor, Dr. L. Arnold Withers, Fort Worth; delegate to the state association and alternates, Drs. Willis G. Cook and K. Herberden Beall, both of Forth Worth.——Central Texas District Medical Society held its annual meeting in Waco, January 11 and 12, and elected Dr. John L. Burgess, Waco, president; Dr. Olin F. Gober, Temple, secretary-treasurer. The newly elected president announced the following appointments: Dr. Thomas P. Weaver, DeLeon, chairman of the section on practice of medicine, Dr. Marcus P. Smartt, Eddy, secretary; Dr. James M. Woodson, Temple, chairman of the section on diseases of the eye, ear, nose and throat, Dr. Walter R. Washburn, Cleburne, secretary; Dr. William A. Wood, Hubbard, chairman of the section on gynecology and obstetrics, Dr. Richard McCormick, South Bosque, secretary; Dr. James W. Hale, Waco, chairman of the section on surgery, and Dr. Ambrose B. Crain, Belton, secretary.——The medical directors of the life-insurance companies of Texas met in conference in Waco, January 11, perfected the organization of the State Medical Directors' Association, and elected Dr. John H. Florence, Houston, president; Dr. A. Manson Curtis, Waco, vice-president, and Dr. Mathew M. Smith, Dallas, secretary-treasurer.——Galveston County Medical Society, at its annual meeting held in Galveston, January 7, reelected Dr. David H. Lawrence, president; Dr. H. O. Sappington, vice-president; Dr. James J. Terrill, secretary; and elected Dr. Ashley W. Fly, delegate to the state association, and Drs. Howard R. Dudgeon and William S. Carter, censors, all of Galveston.

WEST VIRGINIA

Personal.—Dr. Hugh H. Carr, Fairmont, has sailed for Europe.——Dr. Irene B. Bullard, Charleston, has been elected corresponding secretary; Dr. W. Holmes Yeakley, Keyser, assistant recording secretary, and Dr. William W. Golden, Elkins, recording secretary, of the West Virginia Antituberculosis League.

Tuberculosis Dispensary Located.—On January 27, Dr. Harriet B. Jones, Wheeling, and Rabbi Harry Levy, the state committee of the Antituberculosis League to select a dispensary and sanatorium location, completed arrangements whereby the temporary quarters of the Young Men's Christian Association will be secured for the dispensary as soon as the association moves into its new building.

Society Meetings.—Mannington Medical Society, at its annual meeting, January 13, elected Dr. William J. Leahy, president; Dr. Millard F. Hamilton, vice-president; Dr. W. R. Andrews, secretary; Dr. Phoebia G. Moore, treasurer, and Dr. Uriah H. Debendorfer, censor.——At the annual meeting of Brooke County Medical Society, held in Wellsburg, January 14, Dr. William T. Booher, Bethany, was elected president; Dr. Thomas H. Weirich, Wellsburg, vice-president; Dr. Joseph B. Palmer, Wellsburg, secretary, and Dr. Karl C. Brashear, Wellsburg, treasurer.——At the meeting of the Eastern Panhandle Medical Association, held recently at Harpers Ferry, Dr. Briscoe B. Ranson was elected president and Dr. Joseph Howard Hodges, secretary.——At the annual meeting of Marion County Medical Society, Dr. James W. McDonald, Fairmont, was elected president; Dr. James A. Reidy, Monongah, vice-president; Dr. Henry R. Johnson, Fairmont, secretary, and Dr. William H. Sands, Fairmont, treasurer.——Taylor County Medical Association, at its annual meeting in Keyser, elected Dr. J. S. Whitescarver, Grafton, president; Dr. W. J. Cherry, vice-president; Dr. John H. Doyle, Grafton, secretary; Dr. Charles A. Sinsel, Grafton, treasurer; Dr. Dorsey C. Peck, Grafton, censor, and Dr. Jay F. Chenoweth, Simpson, delegate to the state association.——Kanawha Medical Society, at its annual meeting, held in Charleston, elected Dr. Charles O. Grady, president; Dr. Hugh G. Nicholson, Charleston, vice-president; Dr. Henry L. Robertson, Charleston, secretary, and Dr. Benjamin S. Preston, Charleston, treasurer.

UTAH

Personal.—Dr. Anna F. Ries has been appointed city physician of Ogden.——Dr. Albert L. Castleman and George L. Smart have been elected members of the staff of St. Mark's Hospital, Salt Lake City.——Dr. Vonando G. Logan has been appointed city physician and a member of the board of health of Tooele, and Dr. Francis M. Davis has been elected a member of the board.——Dr. Samuel G. Paul has been elected health commissioner and Dr. Hugh B. Sprague, assistant health commissioner of Salt Lake City.

Society Meetings.—At the annual meeting of San Pete Medical Association, in Mount Pleasant, January 20, Dr. John J. Steiner, Richfield, was elected president; Dr. William P. Winters, Mount Pleasant, vice-president; and Thomas R. Gledhill, Richfield, secretary.——Ogden Medical Association, at its annual meeting, January 19, elected Dr. Robert S. Joyce, president; Dr. Edward I. Rich, vice-president; Dr. Joseph R. Morrell, secretary, and Dr. George W. Green, treasurer.——Utah County Medical Society held its annual meeting in connection with the Third Councilor District Medical Association at Lehi, January 8, and elected Dr. Albert G. Stoddard, Spanish Fork, president; Dr. Heber E. Robinson, American Fork, vice-president, and Dr. Frederick Clift, Provo, secretary-treasurer.

VERMONT

Home from Abroad.—Dr. Louis A. Heidel, Rutland, has returned after a trip abroad.——Dr. Bingham H. Stone, Burlington, director of the State Laboratory of Hygiene, has returned after three months spent in London and Vienna.

Doctors' Club Meets.—Rockingham Medical Club met in Bellows Falls, January 3, for its annual meeting, and elected Dr. A. Lawrence Miner, president; Dr. Edward Kirkland, secretary, and Dr. James S. Hill, treasurer, all of Bellows Falls.

Dispensary Not Needed.—At a meeting of physicians of Rutland, held in the office of Dr. James M. Hamilton, January 12, to organize and mature plans to provide a modern medical dispensary for the deserving poor of the city, Drs. William Stickney, George Rustedt, and M. J. Mangan, who were appointed a committee to investigate the matter, reported, after careful investigation, that a dispensary was not needed in the city at that time.

Sanatorium Report.—At the annual meeting of the Vermont Sanatorium, Pittsford, recently, the biennial report for the period ended Dec. 31, 1909, was made, showing that 191 patients had been admitted, of whom 81 were in the first stages, 88 in the second stage, and 20 in the third stage of tuberculosis. The only death which occurred during the period was from miliary tuberculosis in which meningitis developed. Two cases were diagnosed as non-tuberculous and 155 patients were discharged. Of this number 32, or 20.65 per cent., were apparently cured; in 73 cases, or 47.1 per cent., the disease was arrested; in 29, or 18.7 per cent., the patients were improved; in 21, or 13.55 per cent., no improvement or progress was made.

VIRGINIA

Open-Air School for Tuberculosis.—Ironville Sanatorium for Tuberculosis, Roanoke, is to be converted into an open-air school for the prevention of tuberculosis, and for the attainment and preservation of the physical development of the pupils. Dr. Lester L. Schwab, Roanoke, is president of the institution.

State Board of Health Meeting.—At the annual meeting of the State Board of Health, January 5, Dr. Samuel P. Latane, Winchester, member from the Seventh District, was elected secretary of the board to take the place of Dr. Charles R. Grandy, Norfolk, resigned. Dr. Rawley W. Martin, Lynchburg, remains president of the board.

Medical Colleges Merged.—As a result of the fire which recently destroyed the building of the University College of Medicine, Richmond, a merger has been brought about between that school and the Medical College of Virginia. It is understood, since the older of the two schools is the Medical College of Virginia, that that name will be retained following the merger. The agreement calls for the resignation of all the professors of both faculties, so that for the new college the best teachers may be selected.

Medical Society Meetings.—About fifteen physicians of Prince Edward, Cumberland, Nottoway, and Buckingham counties, and territory in adjacent counties not occupied by other county societies, met at Farmville, January 21, and organized the Mettauer Medical Society with the following officers: President, Dr. Peter Winston, Farmville; vice-presidents, Drs. Walter M. Holladay, Hampden Sidney, Prince Edward county; William E. Brown, Shephards, Buckingham; Dr. Carter Weisigar, Cumberland, Cumberland county; James B. Abbitt, Appomattox, Appomattox county; Thomas M. Baird, Crewe, Nottoway county, and William E. Anderson, Farmville, at large; and secretary-treasurer, Dr. William J. Gills, Farmville. The next meeting is to be held in Farmville, April 19, with obstetrics and tuberculosis as the chief topics of discussion.——Patrick-Henry County Medical Society, at its annual meeting in Martinsville, January 8, elected the following officers: President, Dr. J. Russell Perkins, Spencer; vice-presidents, Drs. Leonidas C. Dickerson, Stuart, and Louis E. Fuller, Sandy River; secretary-treasurer, Dr. Jesse M. Shackelford, Martinsville.

WASHINGTON

Increases List of Reportable Diseases.—The State Board of Health has revised its rules regarding reportable diseases and has added to the list cerebrospinal meningitis, hookworm, pellagra and anterior poliomyelitis.

Spokane Secures Sane Ordinance.—The Spokane City Council passed an ordinance at its meeting February 8, prohibiting the firing or discharge of toy cannons, cannon crackers, giant firecrackers, bombs, and blank cartridges within the city of Spokane at any time of the year.

Medical Corps Organized.—The National Guard of Washington has organized a medical department with an auxiliary hospital corps on similar lines of that of the regular establishment. The following officers have been commissioned: Dr. Elmer M. Brown, Tacoma, as colonel and surgeon-general; Dr. John S. Culp, Major Medical Corps, U. S. Army, retired, as lieutenant colonel; Dr. Dudley L. Munsen, Seattle, major; Dr. Frank M. Carroll, Seattle, captain, and Drs. James A. LaGasa, Tacoma, and James A. Durrent, Snohomish, lieutenants.

Against Tuberculosis.—As the result of meetings held last month in Tacoma, an antituberculosis society for Pierce county is to be organized.——The pulmonary hospital near Riverton was opened last month. It is known as the "Pulmonary Hospital of the City of Seattle," and is located on a site on the heights west of Riverton, on a tract of forty-two acres, purchased at a cost of $25,000. A central building has already been constructed, and with eleven open-air cottages, garbage incinerator and disinfectant house, hot water system, electric lights, a system of sewage collection and disposal, the institution will at present accommodate 20 patients.——The executive committee of the Antituberculosis League of King county has voted $5,000 for the construction of a sanatorium for tuberculosis to accommodate 50 patients.

Annual Elections.—At the annual meeting of Skagit County Medical Association, held in Anacortes, January 28, the following officers were elected: President, Dr. Hiram E. Cleveland, Burlington; vice-president, Dr. Winston Appleby, Anacortes; secretary-treasurer, Dr. Wilbur N. Hunt, Burlington; and censors, Drs. James F. Mills, Sedro Wooley, Adolph J. Osterman, Mount Vernon, and Robert L. Maloney, Anacortes.——Pierce County Medical Society, at its annual meeting, held in Tacoma, the following officers were elected: President, Dr. John B. McNerthney; vice-presidents, Drs. John R. Brown and Wilmot D. Read; secretary, Dr. Edward O. Sutton; and treasurer, Dr. Royal A. Gove, all of Tacoma.——At the annual meeting of Spokane County Medical Society, held in Spokane, January 6, the following officers were elected: President, Dr. Henry B. Luhn; vice-presidents, Drs. Matthew B. Grieve and George T. Penn; secretary, Dr. Carroll L. Smith; corresponding secretary, Dr. Clarence A. Veasey; treasurer, Dr. Charles M. Doland, and censors, Drs. Harold H. McCarthy, Wilson Johnston and Frank Rose, all of Spokane.——King County Medical Society, at its annual meeting, held in Seattle, January 3, elected Dr. Park W. Willis, president; Dr. H. Eugene Allen, vice-president; Dr. John W. Hunt, secretary; and Dr. Philip V. Von Publ, treasurer, all of Seattle.——Chehalis County Medical Society held its annual meeting in Aberdeen, January 4, and elected Dr. Arthur S. Austin, president; Dr. James A. McNiven, vice-president; and Dr. Clayton E. Bartlett, secretary-treasurer, all of Aberdeen.

GENERAL NEWS AND COMMENT

New Navy Hospital.—A new navy hospital is to be erected at Guam at a cost of $6,000, on the recommendation of the commandant and medical officers at that station.

Milk Commission Council Meeting.—The judicial council of the American Association of Medical Milk Commissions, of which Dr. Henry E. Tuley, Louisville, is chairman, will hold its annual meeting in St. Louis, June 6, the day before the meeting of the American Medical Association. The meeting will probably be held in the Southern Hotel.

Congress of Alimentary Hygiene.—The second International Congress of Alimentary Hygiene and of the Rational Feeding of Man will be held in Brussels, Belgium, October 4-8, under the patronage of the Belgian government. The business of the congress is to be considered in seven sections namely: Biologic Physics and Energics; Physiology and Physiologic Chemistry —Rational Nutrition-regimen and Dietary; Hygiene of Nutrition—Bacteriology—Parasitology and Alimentary Intoxication; Composition of Foods—Analyses of Foods—Adulteration of Foods, with subsections on different kinds of foods and dairy products; Potable Waters; Legislation—Repression of Frauds—Inspection—Statistics; and inspection of a popular character concerning rational feeding and alimentary hygiene —cooperative societies, food administration, the food of charitable institutions, and food in different sociologic relations. The problems to be discussed are of far-reaching interest and the authorities of the congress have asked the organization of an American committee. Dr. Harvey W. Wiley, Washington, is in charge of the organization for the United States. The membership fee is $4 and associate membership fee $2.

Society Meetings.—At the annual meeting of the Kansas City Academy of Medicine, composed of physicians of Kansas City, Mo., and Kansas City, Kan., held January 8, Dr. George M. Gray, Kansas City, Kan., was elected president; Dr. Paul V. Wooley, Kansas City, Mo., secretary; Dr. Charles B. Hardin, Kansas City, Mo., treasurer, and Dr. Peter T. Bohan, Kansas City, Mo., censor.——At the annual meeting of the Chattahoochee Valley Medical Association, held in West Point, Ga., January 11 and 12, the following officers were elected: President, Dr. Joseph S. Horsley, West Point, Ga.; secretary-treasurer, Dr. William J. Love, Opelika, Ala. (reelected), and councilor, Dr. Henry B. Disharoon, Roanoke, Ala. The next meeting is to be held in Roanoke, Ala.——Fox River Valley Medical Society, at its annual meeting, held in Oshkosh, January 18, elected the following officers: President, Dr. Robert A. Walker, Menominee, Mich.; vice-presidents, Drs. Henry W. Abraham, Appleton, Wis., and S. Gordon Todd, Neenah, Wis.; and secretary-treasurer, Dr. William W. Kelly, Green Bay. A surgical clinic was held for the Association at St. Mary's Hospital, conducted by Dr. Charles W. Oviatt, Oshkosh.——At the seventeenth annual meeting of the Medical Club of Philadelphia, whose membership is made up of medical men of eastern Pennsylvania, southern New Jersey and Delaware, the following officers were elected: President, Dr. James B. Walker, Philadelphia; vice-presidents, Drs. William L. Rodman and S. Lewis Ziegler; governor, Dr. George A. Knowles; and directors, Drs. Ross V. Patterson, Frank C. Hammond, McCluney Radcliffe, James T. Rugh, and Charles A. E. Codman, all of Philadelphia.

The Conference on Medical Education and Legislation.—This joint conference will be held at the Congress Hotel (Annex), Chicago, February 28, March 1 and 2. On the first day will be held the Sixth Annual Conference of the Council on Medical Education at which, besides the reports of the chairman,

secretary and a special committee on practical tests at state license examinations, will be given the following addresses:

"Standards in Medical Education as Related to Standards in General Education," Hon. Elmer Ellsworth Brown, United States Commissioner of Education, Washington, D. C.

"The Obligations of the University to Medical Education," President Henry S. Pritchett of the Carnegie Foundation for the Advancement of Teaching, New York City.

"The Relation of the University to the Medical School," President J. G. Schurman of Cornell University, Ithaca, N. Y.

"Some of the Functions of a University Medical School," Dr. Victor C. Vaughan, Dean, University of Michigan College of Medicine and Surgery, Ann Arbor.

On the second day, at the morning session, will be held a joint conference of the Council on Medical Education and the Committee on Medical Legislation, to discuss a model medical practice act. At the afternoon session, the following addresses will be given:

"Some of the Constitutional Aspects of Medical Licensure," Professor Ernest Freund, Professor of Jurisprudence and Public Law, University of Chicago.

"The Value of Uniform State Laws Regulating the Practice of Medicine," Professor Roscoe Pound, University of Chicago.

"Importance to the Public of the Proper Enforcement of Medical License Laws," Hon. Henry Olson, Chief Justice, Municipal Court, Chicago.

"The Attitude of the Medical Profession Regarding Medical Practice Laws," Dr. Henry B. Favill, Chicago.

On the third day the Committee on Medical Legislation will hold its fifth annual conference, at which, besides the routine business and the reports of the various reference committees, there will be reports from the following special committees:

(a) Report of the Carroll Fund Committee, Major M. W. Ireland, U. S. A., chairman.
(b) Report of the Committee on Optometry, George W. Gay, Massachusetts, chairman.
(c) Report of the Special Committee on Expert Testimony, L. M. Halsey, New Jersey, chairman.

This is the first time that the conferences of the Council on Medical Education and the Committee on Medical Legislation have been held at the same time and place. In the discussion of medical education and the model practice act as well as of a number of the pure-food and other public-health topics, the state boards of medical examiners and the state boards of health are interested, and a large attendance from those boards is expected. There is also the assurance that a large number of university presidents, particularly those connected with institutions having medical departments, will be in attendance. This promises to be a very interesting conference and it is very encouraging as well as significant to note the interest being taken in it by so large a number of distinguished and influential laymen.

FOREIGN

Scandinavian Congress for Internal Medicine.—The seventh Northern Congress for Internal Medicine will meet at Bergen in July, 1911. The topics announced for discussion are "Pernicious Anemia," with addresses by Tallquist of Helsingfors and Ellermann of Copenhagen, and "Cardiac Arrhythmia," with addresses by Frieberger of Upsala and Rubow of Copenhagen.

Memorial to Professor Jeutzer of Geneva.—Subscriptions were collected and a bronze bust of the late Prof. A. Jeutzer was recently installed at the entrance to the new model maternity at Geneva, Switzerland. The institution owes its inception and organization mainly to his efforts. Enough funds remained in the hands of the committee in charge of the subscription to found an annual prize in gynecology, to be known by his name.

Gold Medal Prizes Offered at Buenos Ayres.—The national Academy of Medicine at Buenos Ayres, in order to stimulate scientific research and also do honor to the approaching centennial of the Argentine Republic offers three prizes for the best work in some branch of internal medicine, surgery or the biologic sciences. The prizes will be awarded soon after the conclusion of the International American Medical Congress to convene there May 25, as already mentioned in these columns.

Recent Deaths Abroad.—In addition to the deaths of eminent medical men chronicled in our foreign correspondence of late, the profession has lost the following: Dr. H. Adler, of Vienna, editor of the *Wiener med. Wochenschrift.*——Dr. J. H. Baas, of Worms, a well-known ophthalmologist and author of works on the historical development of the medical profession and of the medical sciences.——Dr. J. Nicolaysen, until last year professor of surgery at the university of Christiania.——Dr. E. J. Widmark, professor of ophthalmology at the university of Stockholm and editor of an ophthalmologic annals.——Dr. J. M. Mariani, of Madrid, of the national board of health and president of the *Academia Medico-Quirugica Espanola* for many terms.——Dr. S. Iglesias, formerly professor of therapeutics at Madrid.——Dr. P. Lesshaft, professor of anatomy at the university of St. Petersburg.——Dr. L. Schweiger, of Vienna, known for his writings on neurology.——Dr. A. Spediacci, professor of pathology at the university of Siena.——Dr. Opitz, an orthopedist of Stettin, Germany, who died from a Roentgen burn, and Dr. O. Happel, of Marburg, from professional infection.——Dr. O. Kölpin, of Bonn, killed in a railroad accident.——The following deaths of eminent medical men of Great Britain have recently occurred: Dr. W. Page May, lecturer on physiology of the nervous system in University College, London, who died January 19, aged 46.——Stanley Bean Atkinson, M.B.; barrister at law; justice of peace; formerly honorary secretary of the Medico-legal society, and the editor of its transactions, who died January 18, aged 36.——Dr. George Skene Keith, author of "Fads of An Old Physician;" and an apostle of the simple regimen.——Major J. C. Weir, R.A.M.C.; sanitary officer of the Lucknow command, who died suddenly from cholera, December 20, on board ship while en route to Calcutta.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Feb. 5, 1910.

A Question of Color Blindness: Expert's Evidence Set Aside

A curious case of color blindness has recently occupied the attention of government officials. A man began a seafaring life as an ordinary seaman and worked himself up so that six years ago he passed the examination for a second mate's certificate. No question of color blindness arose until eighteen months later when he was examined for a first mate's certificate. He was rejected in the color test and asked to surrender his certificate as second mate. He appealed and was submitted for examination to Sir William Abney, F.R.S., an eminent physicist and the foremost authority on color vision in Great Britain. Sir William Abney found that the man was red blind; both colored lights and wools were used in the tests. He was then put to practical tests by two independent men, of whom neither was a color expert. The man was taken down the Thames in a steamer at night when the weather was fine but hazy to see how he could pick up lights and name their color. So accurate did his vision prove for red that he was able to distinguish red rays in the Nore light. The reddish color in the planet Mars was at once seen by him though he was unaware of the planet's identity. Both examiners declared that he had unusually good sight and never made a mistake in determining the color of any light. The man has therefore been declared by the board not to be color blind and as competent to discharge his duties as mate. This result points to the conclusion that the color tests of the board of trade, which have been adopted under the advice of the Royal Society, the leading scientific body in Great Britain, are fallacious.

A Commission on Pellagra

A commission consisting of Sir Patrick Manson, Sir Lauder Brunton, Sir Clifford Allbutt, Sir William Leishman, Professors Osler, Ross, Simpson, Minchin and others has been formed for the investigation of pellagra. It is proposed to send Dr. Sambon and some others to the pellagrous districts of Italy. Dr. Sambon is a well-known opponent of the infected-maize theory and has endeavored to prove that the disease is due to some protozoon. He proposes to examine the relation of the various midges or sand flies to the distribution of cases. A study of their topographic, geographic and seasonal distribution has shown, he declares, a marked correspondence to that of pellagra.

The Appointment of Medical Women to Resident Posts in Hospitals

The question of the appointment of medical women to resident posts in general hospitals has proved a vexed one. Those who advocate women's rights to the extent of the removal of all sex disqualifications insist that women should be eligible for the same posts as men. On the other hand, the obvious objections to women physicians dealing with certain emergency cases, such as retention of urine in the male from stricture, have been urged against their appointment to general hospitals. Viewing the question from the moral standpoint, the reply is made that if nothing immoral is involved in the treatment of women by men for sexual ailments there is nothing immoral in the treatment of men by women for the same

complaints. But there is the further argument that male patients would object to treatment by women. The controversy has reached an acute form at the Manchester Royal Infirmary, the board of which decided not to appoint women physicians to resident posts. As the infirmary is the clinical school of the Victoria University, the question then came before the convocation of this body. A resolution was proposed that, having regard to the interests of women students, the convocation should request the university court to ask the board of the infirmary to reconsider its decision. It was pointed out that as these resident posts are really an extension of the student's career, and are analogous to scholarships and fellowships, they ought to be considered part of the course, through which all medical students might hope to pass after they entered the university. It is one of the features of the university to make no distinction between men and women students. In opposition to the resolution, it was stated that the infirmary had never held out hopes or expectations to women medical students that they should be appointed to resident posts. It was also pointed out that, assuming the province of medical women was to treat women and children, they should seek hospital experience in hospitals specially set apart for women and children and not in general hospitals where it is extremely difficult to employ them satisfactorily. The resolution was carried by a large majority.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Feb. 4, 1910.

The Floods and the Paris Hospitals

The floods, which have created so much havoc in Paris, have unfortunately not spared the hospitals. From the first, the Hospital of Ivry was inundated, and it was impossible to supply it with provisions. With the greatest difficulty, the patients were removed to the Saltpêtrière. The Boucicaut Hospital, which was in particular danger, has been evacuated, the patients being distributed among the Beaujon, Necker and Laennec Hospitals. The situation in some of the hospitals is lamentable. The basements are flooded at the Hôtel-Dieu, at St. Antoine, and at the Charité. The furnaces and the electric light plants are out, the patients have no more linen, the hospital laundries cannot work, and food supplies can hardly be obtained. The situation of the patients is pitiable, in spite of the best efforts of the hospital staff.

The Sanitation of Paris After the Flood

The Prefect of the Seine has just ordered that, as soon as the water shall have receded, the owners of property shall have the premises cleaned and disinfected within twenty-four hours. In case the owners do not comply, the work will be done at their expense and risk.

Election of Sir Patrick Manson to the Academy of Sciences

During its session of January 31, the Academy of Sciences elected Sir Patrick Manson of London foreign correspondent for the section of medicine and surgery.

Literary Critics of the Medical Profession

Since the time of Molière, who in comedies overwhelmed the physicians of his time with ridicule, there have always been in France literary men inclined to exercise their wit at the expense of the medical profession and of physicians. In the present generation certain of these critics, among them Octave Mirbeau and Henry Maret, have been extremely violent in their strictures on physicians. A few years ago Léon Daudet, son of the celebrated novelist, Alphonse Daudet, and himself a writer of talent, published a pamphlet in which he criticized physicians violently, calling them *morticoles*, that is to say, cultivators of death. This pamphlet created quite a sensation, especially because its author had studied medicine, although he did not graduate. Recently Dr. G. Pasquier, devoting his inaugural thesis to "The Enemies of the Medical Profession," asked certain writers, especially those who have often attacked physicians, to express their sincere opinion in regard to the medical profession and its representatives. The replies which he received show that literary men in general hold the medical profession in high esteem. Except Henry Maret, who went so far as to declare that therapeutics had not made the least progress since Hippocrates and Galen, inasmuch as more people die than ever, all the writers render justice to the knowledge and the devotion of the medical profession. Thus Octave Mirbeau writes, "I have no enmity against physicians. If I have sometimes directed some sallies against them it is because the medical profession, like all other professions, is open to criticism and satire—more than the others perhaps, for the higher the standing of a profession the more merciless satire should be against those who fail to recognize their social rôle and their great duties toward humanity. I have on the contrary a very lively sympathy, rising to a very lively admiration, for physicians, by whom I mean, of course, properly educated, hardworking, conscientious physicians. There is no profession which I find finer, more elevated and more noble in its ideals. There is none which demands more disinterestedness, more real renunciation, more self-sacrifice. I speak, be it understood, of practitioners, not of those teaching bonzes who despise medicine, consider therapeutics a low charlatanism and whose whole life is devoted to the chatter of congresses and to the intrigues of salons and academies."

Alfred Capus, the most popular of our dramatic writers, the most spirited painter of French contemporary manners and society, declares that he is certain that if physicians had not a very delicate sense of their responsibilities they would deserve all the attacks made on them; but, he says, this failure to recognize their responsibilities is very rare, or, indeed, altogether exceptional among them. "The moral and philosophic education of the physician is carried to a very high point; it cannot be carried too far. The physician ought to know the social man as well as the physiologic man. There is no profession which, in order to be nobly practiced, demands more general ideas apart from its technic. This kind of education naturally cannot be given at school and depends on personal initiative and conscience."

A few years ago in connection with the publication of the French translation of the celebrated memoirs of the Russian writer and physician, Veressaiev, the poet Jean Carrère said, "Placed before suffering and infinitely varied humanity, it is necessary that physicians should scrutinize the soul and the mind as well as the lungs and the heart, and thus they are forced to be psychologists as well as physiologists, comforters of souls as well as healers of bodies." Abel Faivre, the celebrated painter and humanist, whose caricatures on the medical profession always have a great success, writes, "I am the son of a physician, my brother is a physician and I have too many illustrious friends in the medical profession to be suspected of enmity toward it; but from the point of view of humor and of human characteristics the medical profession offers rich material." He adds that, if asked, he would have expressed his admiration for medical virtues and his high opinion of physicians in general.

Cremation in Paris and in Foreign Countries

M. Ranvier, who officially reports funerals to the municipal council, has reported the number of cremations made in Paris during the last year. There were 403 cremations made at the request of families; 2,653 cremations of bodies from the amphitheaters of the hospitals, from the *École pratique* of the college of medicine, and from the military hospital of Val-de-Grace; and 3,512 cremations of embryos; altogether 6,568 cremations. M. Ranvier states that, while in Paris and in the provinces (Rouen, Rheims and Marseilles have crematories) the situation is stationary, the principal foreign cities constantly make more and more cremations. Germany is at the head with 17 crematories; last year 4,050 cremations were made there, in place of 2,977 the preceding year. In Italy 27 cities practice cremation, and there was a total there of about 400 cremations last year. Great Britain has 13 crematories, and has had 795 cremations. Without dwelling at length on the conditions which have made the progress of cremation slower in France than in Germany, M. Ranvier indicates, nevertheless, that reforms are indispensable. The process requires too much time, and the Society for the Encouragement of Cremation is seeking a process which will reduce the duration by about half. M. Barrier, member of the Academy of Medicine and director of the veterinary school at Alfort was recently elected president of this society in place of Dr. Bourneville, deceased.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Jan. 26, 1910.

Transactions of the Medical Council for Berlin and the Province of Brandenburg

In a recent session of the medical council (*Aerztekammer*) for this district, the question of the establishment of wards for the middle classes in the municipal hospitals of Berlin was taken up. As I have previously told you, the municipal

hospitals of this city provide for only one class of patients—those belonging to the lower class, especially the members of the sick benefit societies and the poor. The rates are 75 cents (3 marks) a day. As the charges for care in the private hospitals for patients of the middle class are relatively high and the fees for medical care must be added to them, the city administration has been requested to make provision for middle-class pay patients in the municipal hospitals. There is a difference of opinion among physicians and in the city government regarding the necessity of this step. In the public hospitals of a denominational but not municipal character there are 414 beds available and in private institutions 844, at a price of from $1.50 to $2.50 (6 to 10 marks) per day. It was recognized in the medical council that actual competition between the private clinics and the city is not to be expected, in consequence of establishments of wards for the middle classes, as the city in consideration of the actual cost could not go under $1.75 (7 marks). The existing dissatisfaction with the private hospitals is not unjustified, as it is often the case that very high prices are demanded from patients not well able to pay. The medical council passed a resolution to the effect that if a second class is established in the Berlin municipal hospitals the fees for medical service in case of patients able to pay shall correspond to those usually received by physicians in the locality. Accordingly, the council regards it as reasonable that a fee of $1 (4 marks) per patient per day shall be required, and that operations shall be charged in accordance with the financial ability of the patient.

From the report of the council's treasurer for 1909, we learn that the regular income from the taxes on physicians (which are legally established and for this council amount to 5 per cent. of the state taxes, in addition to an initial fee of $2.50) (10 marks) amounted to $23,000 (96,000 marks). As expenses for 1910, $33,000 was appropriated, of which $15,000 is for the physicians' relief bureau. This bureau had last year at its disposal $22,000, and paid out for relief $11,000; $2,500 was devoted to the founding of a loan fund for physicians, with the provision that physicians of the council district who have the right to vote may be permitted to borrow at most $125 (500 marks) for one year at 3 per cent. interest. An instance of sectarian intolerance has aroused natural indignation. It seems that a recently graduated medical student had reported to the hospital at Britz (in the neighborhood of Berlin) for his year of practice (which, as you understand, must be served, after the state examination, in a public hospital or scientific institution before the physician can obtain his license), but he received from the head of the hospital the following announcement: "I fail to find in your credentials (*curriculum vitæ*) a statement of your religious faith; as the physicians employed here at present will not associate with Jewish colleagues when off duty, I regret to say that I cannot accept you as a 'praktikant' in case you are a Jew." Naturally, the medical profession has severely condemned this narrow position, and the council passed resolutions to the effect that the executive committee suggest to the imperial chancellor and the minister of education that the district hospital in Britz be forbidden to receive medical "praktikants" under its present administration, and that the executive committee request the imperial chancellor to publish officially a decree that no one shall refuse on sectarian grounds the application of a "praktikant" for his year of service in a hospital.

Report of the Berlin Medical School Inspectors

According to the report of the management of the Berlin school physicians, just published, there were in the last year 44 medical school inspectors for 228,455 pupils. Each physician had from 3,234 to 6,297 children under his supervision. Of the pupils reporting at school, 10 per cent. were rejected, chiefly on account of anemia, rachitis and intellectual inferiority. About one-fifth of the school children had to be kept under special supervision; 456 children were placed in the special classes for the weak-minded and 25 in an idiot asylum. Only 0.7 per cent. of school pupils suffered from tuberculosis. Only a few classes needed to be suspended for a short time on account of epidemics. The municipal laboratory was able to show in some cases that the infectious germs could be removed from the school room only by very thorough disinfection. One-fourth of all the children showed curvature of the spine. The city spent 820,000 (83,500 marks) for meals at school, providing 835,000 lunches in the children's diet kitchen. Hereafter lunches are to be provided in summer, for which $24,000 has been appropriated.

New Affair at the Rudolph Virchow Hospital

Serious complaints have again been made of the Rudolph Virchow Hospital, which, as I have told you in former letters, has repeatedly been the subject of unpleasant discussion. Some nurses had appropriated for themselves most of the extra diet ordered for certain patients. As a consequence, three of the assistant nurses were immediately dismissed and the nurse in charge received a reprimand on account of insufficient supervision. The latter nurse poisoned herself two days after with morphin. Not only was this sad occurrence attributed to the management by the daily press, but also other arrangements of the hospital were unfavorably criticized, especially the overworking of the nurses and inadequate provisions for them. Investigation showed that the nurses had acted contrary to orders, and that the reprimand of the manager was justified in its content and form, and that the suicide of the nurse depended on an accumulation of causes, slight in themselves, especially on the influence of excitement due to menstruation. The management of the hospital should be exonerated from all blame in this matter.

Care of Infants in Greater Berlin

The existing hygienic stations for the care of infants in Berlin received 15,000 infants in 1907, while the number of births this year was about 51,000. In Charlottenburg these institutions were visited by 3,000 infants, 41 per cent. of all the children born during the year. In Rixdorf 1,300 of the 6,000 infants born in 1908 were taken to the stations; in Schöneberg 480 out of 3,200. The Charlottenburg stations distributed in 1908 208,000 half liters of pasteurized milk and 2,200 liters of raw milk for infants. Of this, 71,000 liters were given free of charge to the poor. The entire cost of the infant hygienic stations in Charlottenburg, including the assistance to nursing mothers and the nourishmen of pregnant women before delivery and the care of infants in the children's convalescence stations in 1908, amounted to $25,000 (104,000 marks).

Free Choice of Physicians

The head of the association for protecting the interests of the German trades sickness insurance societies, lately stated in a newspaper that the societies opposed the free choice of physicians, as by this arrangement their chance of existence would be diminished. On the other hand, the mayor of the Westphalian industrial city Hagen makes the statement in a Cologne paper that in Hagen 38 societies with about 25,000 members have adopted the free choice of physicians, and that both physicians and insured are very well satisfied. He has not the impression that the interests of the 25,000 insured and their employers are subordinated to the one-sided economic interest of the Hagen physicians, but rather he believes that the contracts entered into provide equally for the interests of both sides. It is to be hoped that this statement of an experienced mayor will receive attention in the revision of the new imperial insurance law, which is still being actively carried on in the federal council.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Jan. 30, 1910.

Laws on Hours of Labor in Austria

A memorandum drawn up by the sociologic committee of the Vienna Medical Society sets forth present conditions of labor in Austrian factories, with the object of inducing the government to hear suggestions from medical experts before formulating the much-needed reform of our public health act dealing with the conditions of labor. Most of the regulations now in force date from some time between 1896 and 1869; only a few imperatively demanded orders were promulgated a year or two ago. The ministry of commerce has power to regulate the length of the working day in some occupations which are liable to seasonal and trade fluctuations (in some instances a fourteen-hour working day may be permitted for certain weeks), but may not take action to protect the worker's health. The length of the working day in various trades is so long as to involve a deterioration of the health of a large proportion of the working population. The memorandum of the committee to the government suggests that the ministry of commerce be empowered to limit hours of work, after consulting the chief board of health (*Oberste Sanitätsrath*), in all instances in which the health of the laborers is injuriously affected; and that the number of trade-inspectors be increased, chiefly by the appointment of qualified medical men.

Cremation Not Officially Favored in Austria

In Prague, a society called "Flame," desiring to promote cremation, was refused permission, not merely to erect a crematory, but also to make its object known through popular

lectures. Needless to say, religious motives were behind the refusal. There are, however, two crematories in this country, one in Graz and one in Vienna; but bureaucratic difficulties are often interposed, so that generally the cremation of an Austrian takes place outside the frontiers, in Gotha, Germany. Although the society for the promotion of popular education (*Volksbildungsverein*) has held demonstrations and lectures on the subject in Vienna and other large cities, religious prejudices are much too strong in the minds of our conservative bureaucrats to permit them to see the advantages of cremation.

Pharmacology

THE AMERICAN DRUGGISTS SYNDICATE

Its New Propaganda of Personal Abuse and Professional Dissension

There is a saying current in the legal world regarding the attitude taken by a certain class of lawyers: "No case? Abuse opponent's attorney!" The American Druggists Syndicate finds itself in this predicament.

It being impossible to refute the statements made in THE JOURNAL, the officers evidently concluded to "reply" by making a general *personal* attack. They have secured for that purpose the material that has been used so liberally during the past year by those who, to satisfy personal animosity and to aid certain proprietary interests whose frauds THE JOURNAL has exposed, have striven to bring about a return to the old, "let-us-alone" days.

The A. D. S. publishes a house-organ called the *Voice of the Retail Druggist*—a title, by the way, that is an unwarranted slander on the decent pharmacists of the country. In the January issue of the *Voice*, in an attempt to offset the charges made in THE JOURNAL, the real issues are carefully befogged while pages are devoted to villifying the editor of THE JOURNAL. This specimen of journalistic mud-slinging has evidently been given wide circulation.

Nor is this the only method by which the officers of the A. D. S. attempt to create a breach between pharmacists and physicians; circular letters are being sent broadcast to pharmacists with the same object in view, and with the further hope of causing dissension within the ranks of the medical profession itself. The following is one example of this new propaganda of destruction:

AMERICAN DRUGGISTS SYNDICATE

GREATER NEW YORK, Feb. 8, 1910.

Gentlemen:—You have no doubt read in the January *Voice* our reply to the vicious and lying attacks made upon the A. D. S. by Dr. G. H. Simmons in THE JOURNAL of the American Medical Association, of which he is editor. We trust you have familiarized yourself with the data covered by the *Voice* articles on Simmons and are prepared to present them in a cogent manner to physicians and others who may be interested in the controversy provoked by Simmons' onslaught.

We believe that the great majority of physicians belonging to the A. M. A. will condemn Simmons' course when they understand the true character of the man and the unworthy motives that govern his attitude toward the A. D. S. The medical council of Chicago, where Simmons is well known, has already condemned Simmons' general policy and has taken steps to oust him from the position of editor and secretary of the A. M. A. [Reference is here made to the resolutions adopted at the January meeting of the Council of the Chicago Medical Society, and rescinded at the February meeting. —ED.]

We rely on you as one of the most loyal and enthusiastic A. D. S. members to see that this matter is presented by some friendly physician at the next meeting of your county medical association. It will be an easy matter for a physician to become indignant and demand that the charges made by the *Voice* be investigated. That is all that will be necessary, no matter what action is taken by the county medical society. It will have the same effect on Simmons.

By acting promptly in this matter you will do yourself and all the A. D. S. members a valuable service. Please keep us informed as to the results of your action.

Very truly yours,

THE VOICE OF THE RETAIL DRUGGIST,
WALTER LINGENFELDER, Editor.

Thus we have another phase of the "patent medicine" interests urging reforms (?) in the American Medical Association.

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION]

PHARMACEUTICAL IMPOSSIBILITIES—CONIIN OR CICUTIN

W. A. Puckner and L. E. Warren

Some time ago[1] a contribution from the chemical laboratory showed that pharmaceutical manufacturers often attempt that which is, if not impossible, at least impracticable. The present article illustrates this point still further.

An advertisement was offered to THE JOURNAL recently, in which among other products reference was made to cicutin granules. Since advertisements for medicinal articles are accepted for THE JOURNAL only when the preparations are to be found in the United States Pharmacopeia, the National Formulary, or New and Nonofficial Remedies, and since cicutin is to be found in none of these, reference to cicutin granules was omitted from the advertisement. In view of this request, however, for the privilege of advertising an unofficial article not contained in N. N. R., the Council on Pharmacy and Chemistry decided to consider cicutin with a view to its eligibility for inclusion with N. N. R., and the laboratory at the request of the Council took up the examination of cicutin granules.

Cicutin is the practically obsolete name of the volatile, liquid alkaloid better known as conin or coniin, to which conium owes most of its medicinal effects. The free alkaloid —being a volatile liquid and having a disagreeable mouse-like odor—is not given as such but is used in the form of one of its salts, as for instance coniin hydrobromid, which is stable and odorless.

From the above it will be realized that it would be a difficult task to prepare tablets, pills or granules containing the free alkaloid, yet one manufacturing house was foolish enough to offer for sale granules said to contain 0.0005 gm. (1-134 grain) of cicutin. Having in mind the results of the examination of the tablets of bismuth, opium and phenol (which demonstrated that phenol could not be put up successfully in tablet form) the laboratory decided to determine to what extent the manufacturer had been successful in his attempt to prepare granules containing a volatile liquid.

A specimen of cicutin granules was purchased in the open market and examined with especial reference to its content of free alkaloid. As was to be expected from the volatile nature of the alkaloid no free coniin was found. Combined alkaloid, however, was present in amounts equivalent to about 53 per cent. of the amount claimed to be present in the free state. If calculated to hydrobromid the quantity found would amount to about 85 per cent. of the dosage stated on the label. From this it seemed probable that the manufacturer had used a salt of coniin in place of the free alkaloid and had carelessly permitted the label to mislead. But when informed that the granules did not contain the free base as claimed, the reply of the manufacturer indicated that the attempt had actually been made to produce granules containing the free alkaloid in definite quantities. Apparently no effort had been made to determine to what extent the attempt to put a volatile liquid into granules on a commercial scale had been successful, i. e., no laboratory control seemed to have been exercised over the finished product. In fact, the indications were that the retention in the product of any part of the alkaloid used was due to the presence of traces of acid, present as an impurity in the excipient, which had combined with a portion of the alkaloid to form a nonvolatile salt.

As a check a specimen received directly from the manufacturer was examined. The examination of this specimen showed that free alkaloid was absent and that combined alkaloid was present in amounts equivalent to about 50 per cent. of the amount claimed to be present in the free state—results

1. Puckner, W. A., and Clark, A. H.: Examination of Tablets of Bismuth, Opium and Phenol, THE JOURNAL A. M. A., July 25, 1908.

agreeing substantially with those obtained in the examination of the first specimen.

The results of the second examination having been submitted to the manufacturer and their correctness admitted, the company stated that it had deleted the article from its price list, had stopped supplying it, and had called in, so far as possible, whatever stock of the product there was outstanding. In view, too, of the criticism of the use of the practically obsolete word cicutin the company will give the better known term coniin as a synonym and cross-reference.

COMMENT. The results just given again emphasize the need of such investigations by the Council of Pharmacy and Chemistry and the Association laboratory, especially of unofficial drugs that have no standard of purity and which are therefore peculiarly liable to adulteration or variations in strength. Physicians will do well to confine their prescribing so far as possible to standard, official drugs and to those contained in New and Nonofficial Remedies. The enforcement of the Food and Drugs Act and the keenness of competition have sufficed to make many standard chemicals used in medicine now available in a high degree of purity. Even proprietary drugs, largely through the efforts of the Council, have been made more reliable. On the other hand there are on the market an immense number of unofficial, non-proprietary drugs which are practically uncontrolled. Because of their large number and relative unimportance and because there are no standards of purity for them, and because there is little or no competition in their manufacture they are peculiarly likely to be impure and unreliable and it is highly desirable that physicians avoid their use so far as possible.

As for the drug conium and its alkaloid coniin (one time respectively known as cicuta and cicutin) it or both probably belong to the very large class of drugs that "never would be missed!" If, however, the physician wishes to obtain the effect of coniin he should give preference to one of its well-defined and stable salts.

Amendments to the Constitution of the Pharmacopeial Convention

To the Medical and Pharmaceutical Press: At a regular meeting of the Board of Trustees of the United States Pharmacopeial Convention, held at Columbus, Ohio, Jan. 28 and 29, 1910, it was resolved, five members of the Board of Trustees assenting thereto, to submit to the next meeting of the United States Pharmacopeial Convention (incorporated) the following propositions to amend the constitution of the convention in the following particulars:

1. To amend Section 2, Article II, relating to membership, by inserting after the title "the Surgeon-General of the United States Public Health and Marine-Hospital Service," the following: "The Secretary of Agriculture, the Secretary of Commerce and Labor, the Association of Official Agricultural Chemists, the Association of State and National Food and Dairy Department, the National Wholesale Druggists' Association and the National Dental Association."

2. Also to amend said Section 2, Article II, by changing the words "three delegates" in line eleven (page seven of the reprint of the Constitution and By-Laws of 1909) to "one delegate;" the effect of this change being to reduce the representation of each organized body and department to one delegate each.

3. Also to amend Article IV, concerning "Committees and Trustees," by changing the title "Committee on Revision," to that of "General Committee on Revision" (Ibid. last line).

The constitution does not require notice to be given of proposed changes in the by-laws of the convention, but to make clear the purpose of the change proposed in the present title of the Committee on Revision, it is hereby announced that the Board of Trustees will submit to the convention propositions to amend the by-laws as follows: To increase the number of members on the Committee on Revision, hereafter to be known as the "General Committee on Revision" from twenty-five to fifty, said General Committee on Revision to create from its own membership an Executive Committee on Revision of fifteen members, to have immediate charge of the work of revision, and also giving to said General Committee on Revision certain advisory and supervisory powers over the work of the Executive Committee on Revision.

MURRAY GALE MOTTER, Secretary.

SANATOGEN

"Will you please give me the composition of Sanatogen, exploited by the Bauer Chemical Co., New York? I wish the information to answer a question that has been referred to me." B. F. B., Lincoln, Neb.

According to the manufacturers, this patented medicine—or food—is composed of 95 per cent. casein and 5 per cent. sodium glycerophosphate. The preparation is advertised very extensively to both physicians and the laity, on both sides of the Atlantic. In Great Britain it is a "tonic food," in this country a "food tonic;" whether this is a distinction with or without a difference, it is hard to say. The public is told that sanatogen is "a muscle builder and a nerve and brain food;" the medical profession, that "it should not be regarded as a food preparation in the ordinary sense of the term and it is not offered as such to the medical profession. . . ." Many of the claims made for this combination of milk-curd and glycerophosphates are exaggerated and absurd. The following are taken from advertisements, appearing both in this country and abroad

"The Re-Creator of Lost Health."
"Sanatogen is . . . a rebuilding food."
". . . revitalizes the overworked nervous system."
"Specific nerve tonic action."
"Most reliable and scientific of all nutrients."
". . . *in certain diseases* it exerts a *specific action* which renders it a valuable adjunct to other curative measures."

In one of the form letters sent to physicians, the makers of sanatogen opine that "you have likely noticed" an article that appeared "in the May issue" of a certain medical journal. The ingenuousness of this intimation becomes apparent when it is known that a few days previous to receiving the letters, the physicians had been the recipients of pamphlet reprints of said article—"With Author's Compliments."

That milk curd has a food value no one will deny; that the glycerophosphates of soda have a place in medicine may be admitted; but that a combination of these two products should become at once the summum bonum of medicinal foods is a proposition that will not appeal to the thinking physician.

Correspondence

Physicians and Pharmacy—A Plea for Harmony[1]

To the Editor:—The nostrum evil continues to be a serious menace to the spirit of harmony which has been growing rapidly within the last few years. The National Association of Retail Druggists has been doing splendid work in what is known as the propaganda movement for the extension of the use of non-secret, ethical preparations of the United States Pharmacopeia and National Formulary. It has also labored hard to bring about a better and more harmonious spirit between physicians and druggists. The American Medical Association has accomplished an enormous amount of good through its Council on Pharmacy and Chemistry in giving the medical profession more comprehensive and detailed descriptions of the medicines which are unofficial but are used largely in actual practice.

The coming convention which meets in May in the City of Washington for the revision of the Pharmacopeia should be made up of delegates who will meet with one purpose, that of improving the present Pharmacopeia on the broadest, most scientific and practical lines. If the deliberations of this body are to be marred by even a touch of the old style rancor, crimination and recrimination between the members of the associations representing medicine and pharmacy, then there may be expected a repetition of the disastrous results which have kept back progress so long during the last thirty years. Why cannot the national associations representing medicine and pharmacy recognize the best work done by those members who are really working along the same lines for the elimination of all that is bad, and particularly the nostrum evil? Unfortunately, if one is looking for inconsistencies in the rank and file of the members of any of our national medical or pharmaceutical organizations, they can be found without the aid of Diogenes' lantern.

1. See editorial comment in this issue.

The druggist points to his prescription file and shows how many proprietary medicines are being prescribed by the physicians of his locality. The physician points the finger of scorn at the advertising cards in the druggists' windows of patent or proprietary medicines, kidney cures, catarrh remedies, headache powders, etc., and the druggist again points to the physician, who he believes has robbed him of his business by dispensing ready-made remedies to his patients, and the physician retorts that when the druggist stops prescribing over the counter he will stop dispensing, and so the angel of peace ceases to hover over the warring factions and silently departs until a more convenient season arrives.

The spirit of the "get-together" meetings which have been held throughout the United States where the druggist and the physician can discuss means of working together and fighting the common enemy, has been productive of a vast amount of good, and why cannot the old issues, which have never brought anything but strife and stagnation, be permitted to die, and in its stead let the new order of things with its spirit of harmony and cooperation prevail? This would mean a mutual respect. If this be done the medical practitioner, nauseated by the confusion arising from the trial of so many proprietary preparations, can be brought to a realization that he can be more successful in his practice if he employs at least 75 per cent. of official, non-secret substances, and the pharmacist will come back to his own by compounding prescriptions written by the physician to suit the particular stage of the disease from which the patient is suffering at the time. For the prescription should be changed from time to time as the condition changes, and the pharmacist realizes that it is his duty, and also to his interest, to advise his customers that proprietary and ready-made preparations when continued for any length of time often cause delay in alleviating disease, and, indeed, do a vast amount of harm, because the contents of the bottle remain the same, and if fitted for the onset of an attack is totally unfit for the convalescent or inflammatory stage.

Let us reason together and press forward the new order of things. The nostrum evil, which has existed for centuries, cannot be exterminated in a year nor probably a decade, maybe never; but it can be and is being controlled to an extent which few physicians realize. As an illustration, a large manufacturer of glassware stated six months ago that his business had been greatly curtailed. The question was asked, "Has the growth of prohibition in the states decreased the demand for whisky?" "Yes," he replied, "particularly in the South and West, but our business has fallen off nearly 50 per cent. in the making of proprietary medicine bottles and jars." Education through the public press and through our magazines is going on apace, and the day is probably not far off when legislation will make it a penal offense for using lying and misleading advertisements to the public, which have for so long been the principal asset of quack medicines.

JOSEPH P. REMINGTON, Philadelphia.

An Appreciation from Professor Politzer

To the Editor:—In reference to the anniversary of attainment of the degree of doctor of medicine at the University of Vienna, my American pupils and friends have given so many evidences of friendship and attachment, that I am only able in this way to thank them all.

If American specialists visiting Vienna will call on me, it will be a source of great pleasure to me to show them my collection of pathologic and anatomic specimens which, through years of careful selection, contains many instructive objects.

PROF. DR. A. POLITZER, Vienna.

Human Hair Used for Sutures Long Ago

To the Editor:—I have been much interested in reading the article by Drs. Guthrie on the "Suture of Blood Vessels with Human Hair," in THE JOURNAL, Jan. 29, 1910. I have had no experience with suture of blood vessels, but as a suture material for places requiring very delicate threads, especially the face, mucous membrane of the lips, and the conjunctiva, I have used human hair repeatedly—probably a hundred times or more from 1880, when I first began practice, onward, and always with excellent results; though not much sterilizing of sutures was done in the early days. Wounds so sutured did not suppurate, and the resulting scar was reduced to a minimum. The hair was just plucked as wanted from the head of any woman convenient, passed through a weak phenol solution, or more frequently not even that, and used at once. I never saw a bad result. I received the "tip" from a brother practitioner, like myself then in general practice, who referred to it as being well, though not sufficiently widely known. From the phrase, "we decided to test a material universally distributed, namely, human hair," I gather that the authors of the article consider the use of hair novel, not merely for this special purpose only, but for any suturing at all.

KENNETH W. MILLICAN, St. Louis.

Scopolamin-Morphin Anesthesia

To the Editor:—In THE JOURNAL of February 12, I notice an error in the editorial on scopolamin-morphin anesthesia in labor which might lead to serious trouble. You state, "In obstetrics the usual initial dose is 0.0003 gram (about 1/100 grain) of hydrobromid of scopolamin." This should read 0.0003 (about *1/200 grain*) of scopolamin. My own experience with scopolamin in surgical cases covers a period of three years, and I can state that I have seen no bad effects following its use. I always inject two doses, the first 1/200 gr. of scopolamin and 1/6 gr. of morphin one hour before, and the second immediately before the administration of spinal anesthesia or ether. So far, I have not used the drug in obstetrics, but would favor its use in suitable cases.

ARTHUR J. PULS, M.D., Milwaukee.

The Maguire Dropper for Saline Solution

To the Editor:—About four years ago I saw the growing need of some apparatus whereby saline solution could be administered by the drop method. After four years' work and an expense of over $500 (paid in experimenting), I perfected what is now known as the "Maguire dropper," and described it in the *Journal of the Michigan State Medical Society*, July, 1908. As it was against professional ethics to have this apparatus patented, I turned it over to the profession, and I notice in the last few months, since it has been placed on the market, that three imitations have appeared. One man has been so professional as to take the credit of getting it up himself and has applied for a patent on it, giving himself the credit of being the inventor of my dropper. This I do not care so much for, but each one has designed it wrongly and if these droppers are used they will only throw discredit on my apparatus and place me in a position similar to Dr. Murphy's with his button, when men undertook to modify what he had made perfect from his long experience.

I claim priority and the rights to patent on the "Maguire dropper," but for reasons above stated have turned my apparatus over to a surgical instrument house to manufacture for the benefit of the medical profession.

F. J. W. MAGUIRE, Detroit.

The Paris Floods

PARIS, Feb. 1, 1910.

To the Editor:—For the past week Paris has been struggling with a rising flood, unlike anything recorded during the last 300 years. The Seine has risen about 24 feet above its customary level, and is fortunately now subsiding, but leaving some of the most important parts of Paris and the most fashionable quarters in a pitiable state. The causes of this flood are not so clear as one would suppose. I have spent the last two weeks in Paris, and no extraordinary rainfall has been recorded here during that time. The weather has been mild; the grass is green everywhere; very little snow has fallen in France. Indeed, the complaint has been in France and parts of Switzerland that the scant snow has prevented the customary winter sports. The floods, nevertheless, are a very

serious reality and are due, doubtless, to persistent but not violent rainfall in the watershed of the Seine, and owing to mild weather and lack of proper percolation, the waters rush with unusual violence to the sea.

The worst feature of the flood is not so much the devastation along the river front, but the great damage done to the sewers of the city, and the consequent flooding of residential and business districts with sewage. These far-famed sewers of Paris are unable to discharge their contents in the ordinary way into the Seine. The rising river has caused a back-pressure in the sewers, and as the pressure is augmented by the accumulated flow from above, they have given way and have filled the streets and many thousand cellars and lower floors with their contents. More than this, the six lines of the metropolitan underground railway have had a hard struggle with the water, and service is entirely abolished on some of the principal lines as they are flooded. It will take months to empty the subways and the cellars and to render them sanitary and fit for travel. The whole military force, the Red Cross organization and the national government are actively at work and will take the most energetic and advanced measures for disinfection. The board of health is already issuing instructions to the public, and backed up by military authority, it is probable that within a month Paris will have purified itself and anxiety as to the future will have ceased.

All the Parisian papers, and the British papers as well, have pictured Paris in the most abject misery, and there has been widespread alarm for the safety of Americans sojourning in Paris, but this is quite unnecessary. In the fashionable quarter, near the *Arc de Triomphe*, one would scarcely know Paris was suffering in any way. To be sure, Longchamps is under water and resembles a beautiful lake, but the *Bois* is as gay as ever, and I believe that by the time this letter is in print everything will be fairly safe and charming in Paris.

The rising Seine has closed several hospitals; chief among these is the famous *Salpêtrière*, with 1,500 patients. Situated near the Seine and the *Jardin des Plantes*, it was soon invaded, but all the patients were successfully removed to *Bicêtre* and other hospitals. I saw the bears in the *Jardin des Plantes* up to their necks in water as I returned from Professor Raymond's clinic at the *Salpêtrière*.

The Boucicaut Hospital became flooded and 400 patients were successfully removed by boats to waiting automobiles, which took them, wrapped in their bed clothes, to points of safety. It took two and a half hours to remove the 400 patients, and credit is due M. Lépine for accomplishing this feat successfully.

The American ambassador, Mr. Robert Bacon, has been forced from his residence on the Rue François Ier. The newly completed American Hospital, in a suburban part of Paris, Boulevard du Chateau, Neuilly, is flooded. This model hospital cost $200,000, and was just ready to be opened, and has suffered thousands of dollars of damage. It is a gem of modern hospital construction, with free wards and private rooms at moderate prices. The medical board, consisting of Dr. A. J. Magnin, Dr. E. E. Gros and Dr. Crosby Whitman, has reason to be proud of this institution, and it will in due time be ready for use. Every American resident in Paris will feel safer in the mere knowledge that such an institution exists. The president, Mr. John H. Harges, the vice-president, Mr. J. J. Hoff, and such well-known governors as Mr. J. P. Morgan, are very earnest in working for the success of the American hospital.

An American visiting continental hospitals cannot fail to note the wide contrast between their nurses and those in British, Canadian or American hospitals. One object lesson which the American Hospital in Paris will afford will be its force of nurses, and Parisians will do well if they could introduce into their famous hospitals an up-to-date system of nursing. The trouble is that on the continent nursing has not risen to the dignity of a profession.

After a rapid tour through Italy, Switzerland and France, I retain my high opinion of the American hospital, the American nurses and the American system of medical education.

GUY HINSDALE.

Miscellany

CLIPPINGS FROM LAY EXCHANGES

OLECTOMY

J. J. A——— has just undergone an operation . . . for what is known as "grease leg," a very uncommon and very painful disease. This was caused by a sprain in his right knee. The oil that lubricates the system gathered there, and some six ounces of oil of a reddish color were extracted.—El Paso (Tex.) *Herald*.

THE TUMOR WERE REMOVED

Last week Drs. ———, . . . , performed one of the most delicate and difficult surgical operations that the medical fraternity are seldom called on to perform. For some time Miss ——— has had a tumorous growth in the stomach that has been carefully noted by Dr. ———, and when he deemed the right time for a surgical operation to be performed informed Miss ——— that only a most dangerous and difficult operation could save her life. The time arrived last week and the young lady bravely consented that the work might go on. Drs. ——— and ——— were called and a large tumor removed. —Scottville (Mich.) *Enterprise*, Dec. 16, 1909.

A HOROBLE FIREY SWELLING SPRED

Last Thursday evening . . . W. D. F. ——— noticed a slight sore on the second finger of his right hand, . . . , it gradually grew worse until by Friday evening his hand was badly swolen and was gradually swelling up the arm. The red danger signal of blood poison began to show and a strip an inch and a half wide and of a firey inflamed color pushed its horoble course to the shoulder, while numerous small branches began to shoot from it. Billy was suffering greatly and his fever run up to 103. Dr. ——— was summoned and his skill soon arrested the spred of the poison, and he soon began to feel easier and by Sunday morning he was able to be out of bed.—Standard (Neb.) *Guage*, April 22, 1909.

MADE HIM ILL TO BE THREATENED

Dr. ——— is quite ill of a threatened attack of fever.—Pikeville news, Ashland (Ky.) *Independent*, June 9, 1909.

State Antimalaria Campaign in Italy.—The antimalaria legislation adopted in Italy during the last ten years provides for the free distribution of quinin by the state to those suffering from malaria who are unable to secure it otherwise. For patients able to pay, quinin is sold at a nominal price at convenient places, *e. g.*, at every postoffice in the country. A table showing the sale of quinin by the state and the mortality from malaria for successive years appears in the *Revista de Medicina y Cirurgia* of Havana for November, copied from the *Revue d'Hygiène et de Police Sanitaire* of Paris. The article is by Bertarelli of Parma and is entitled "Ten Years of Antimalaria Legislation in Italy." In 1900, before the passage of the law providing for state distribution of quinin, the total mortality from malaria was 15,865. In 1901, it was 13,388. In 1902, the antimalaria law went into effect. In 1902-1903, 2,242 kilograms of quinin were sold or distributed gratuitously by the state. The effect on the malaria mortality was immediate, the number of deaths dropping to 9,908 in 1902 and to 8,519 in 1903. The sale of quinin gradually increased with each year, amounting to 24,351 kilograms in 1907-1908, and the mortality was proportionately lowered, being only 4,160 in 1907, or little more than one-fourth of the mortality seven years ago. The profits to the state from the sale of quinin in 1902 were 34,000 lire ($6,800); in 1908, 600,000 lire ($120,000). While much of the reduction in the death-rate is due to the state distribution of quinin, part of it may be attributed to the rigid laws enacted for the extermination of the mosquito and protection against it. The laws of 1901 and 1904 require that all dwelling-houses and especially all sleeping-rooms in definitely designated endemic zones must be screened from June to December. An interesting feature of this law is the provision requiring the screening of the tops of chimneys, as well as of doors and windows. Wire netting is

required and the screening of doors is so arranged as to provide for a small entrance vestibule with double doors, something after the style of an air-lock in a cofferdam. Patients suffering from malaria must be kept in separate sleeping-rooms, which must be carefully screened from the rest of the house. Rigid regulations for the extermination of mosquitoes by draining or filling in stagnant pools, etc., are provided. These regulations apply not only to householders but to manufacturers and landed proprietors as well, and premiums up to $200 are allowed where precautions are taken on a large scale. Attempts at similar antimalaria suppression on the part of the state have also been made in Greece, Bulgaria and Dalmatia.

Rural Hospitals.—The advantage of the hospital to the city dweller has been long recognized; it is a benefit to both the physician and patient. One great advantage is the fact that it enables the physician to make use of modern methods of diagnosis which otherwise would be inaccessible to him. These advantages are to a large extent denied to the country practitioner, who must spend so much time in getting to his patient and in actual bedside observation that he has no time for the laboratory methods of diagnosis. Harris A. Houghton, in the *International Hospital Record*, Oct. 15, 1909, outlines a plan by which he believes these advantages of the city could be secured in country towns as well. He proposes that hospitals shall be erected by stock companies. The county medical society or an association of physicians could assume the management of such an institution. Houghton refers to the Bayside Infirmary at Bayside, Long Island, which was organized with a capital of $20,000. The hospital should not be made primarily a charitable institution, but should aim to make profit enough from well-to-do patients so that it could afford opportunities for the charitable societies and individuals of the community to care for needy patients at cost. It could thus enter into contracts with the poor authorities and with churches and lodges that would be mutually beneficial. One bacteriologist could serve both the hospital and the health department. Aside from the advantages of such a hospital to the physician there are several ways in which it would be of distinct service to the community: It would tend to overcome popular prejudice against hospitals. The patients would get the benefit of laboratory methods of diagnosis, better facilities for treatment and better nursing, and the opportunity given to young women to acquire training in the care of the sick, not so much for the purpose of enabling them to earn money as to render them capable housewives, would in a few years have a remarkably beneficial effect on the general welfare of the community.

Women and Hours of Labor.—*The Survey* for January in discussing the subject of overwork in connection with the recent decision of the Illinois court declaring unconstitutional the law limiting to ten hours the working day for women in factories and other industrial establishments, says: Expenditure of energy of any kind manufactures in the body certain poisonous products which are eliminated during rest. When the expenditure of energy is excessive or the period of rest is insufficient the fatigue poisons are not entirely eliminated. The periods of rest should therefore bear such a relation to the periods of labor that the fatigue of each day is completely repaired before the work of the next day begins. If this relation is not maintained evil consequences follow. The general vitality is lowered and susceptibility to general diseases and infections is greater. But the most serious danger is the tendency to exhaust the central nervous system, which controls all the vital functions. Overwork increases the danger from industrial accidents. The faculty of attention is weakened and an undue proportion of accidents occur. With relation to women, excessive hours and overwork, especially in occupations requiring continuous standing, are a cause of many deformities and diseased conditions of the pelvic organs which affect unfavorably their child-bearing function, and children born to exhausted women are at birth below the normal in size and weight and the mortality among them is abnormally high. Women are fundamentally weaker than men and are therefore more seriously affected by the strain of modern industry. Between the ages of 15 and 50 they lose much more time from work on account of sickness than men, even deducting the time lost on account of child-birth. Finally, women more urgently need the protection of the state from long hours and overwork because they are to be the mothers of the next generation. The problem of finding out at what point normal fatigue becomes pathologic fatigue when applied to the whole body of workers and the limitation of the hours of work is not an easy one.

Diagnostic Methods Among the Ancients.—The old statement that there is nothing new under the sun seems again to be verified in the statement that Laennec, to whom is attributed the discovery of the method of physical diagnosis, inspection, palpation, percussion and auscultation, was not the originator of these methods, but only perfected their use as an art. Cordell (*Bull. Johns Hopkins Hosp.*, December, 1909) calls attention to the fact that Aretaeus, the Cappadocian, a successor of Hippocrates, and a student of his works, and a contemporary of Galen, in the second century of the Christian era practiced all these methods. Aretaeus, as disclosed in his writings, was a very acute observer, and by inspection of his patients noted the character of the respiration, posture, decubitus, color, heat and swelling of the surface, the condition of the veins, tongue, pulse, nails, sputum, etc. He likewise resorted to palpation in enlargement of the liver and spleen, and notes the change in the position of ascitic fluid with change in posture of the patient, and by percussion noted tympanites, saying that the abdomen when tapped sounded like a drum. Hippocrates describes râles in diseases of the lungs, such as pneumonia, phthisis, empyema, etc., and they are also referred to by Caelius Aurelianus in the fifth century A. D., and by Paul of Aegina in the seventh century. The term percussion is used by Aretaeus in describing the symptoms of asthma, a name which evidently embraced other conditions giving rise to dyspnea, besides that to which we limit it. Hippocrates also laid much stress on succussion sounds in empyema. It is a fact of the highest interest that Aretaeus recognized heart murmurs by auscultation, and he seems the only one of the ancient writers who auscultated the heart.

Puncturing the Amniotic Sac as Aid to Delivery.—In the *Gynaekologische Rundschau*, III, 1909, 808, Prof. P. van der Hoeven of Leyden states that in his experience with 1,411 cases delivery was shortened by more than an hour when the amniotic sac was ruptured early. The only condition is that the os must be dilated to at least 3 or 4 cm. before the rupture occurs. This constant observation has impelled him to make a practice of rupturing the sac when the os is dilated to this extent. It permits the head to act more forcibly on the os and delivery is concluded in less time than otherwise. In a primipara with the os open to 5 cm. artificial rupture of the membranes brings expulsion in less than an hour and a half in more than half the cases, while with multiparæ the child is born in about an hour. In the Leyden clinic the number of cases in which forceps were required has dropped from 11 to 2 per cent. and for multiparæ from 8 to 1 per cent. Elsewhere in the Netherlands, where this is not the practice, forceps are used in 9 or 10 per cent. Only in three-tenths of the Leyden cases was version required as the skull did not present. The necessity for the various obstetric operations has been reduced by 50 per cent. since this procedure has been made the routine practice. Another advantage is that the number of cases of prolapse of the umbilical cord has also been correspondingly reduced. The woman must lie on her side in bed afterward; otherwise prolapse of the cord is still possible. He is collecting material for a monograph on the importance and advantages of opening the sac at a certain stage of labor. He uses his finger, not an instrument.

The Dividends of Decency.—The *Druggists Circular*, whose attitude of uncompromising opposition to quackery and the nostrum evil is well-known, says in a recent issue: "Astonishment at the attitude of the *Circular* toward the nostrum traffic is continually manifesting itself in those quarters in which a rake-off from the heavy profits of this cancerous growth on the drug business is regarded as one of the chief things that make several vocations allied to pharmacy worth following. Just why a publication should act openly and squarely with its readers when there seems to be so much more ready money in patting the nostrum men on the back with one hand and pulling the wool over the eyes of the

retailer with the other, never ceases to cause wonder in the aforementioned quarters. Truly there may seem to be more money in following the policy of letting none of anybody's cash get away, but the success of the *Circular* for considerably more than half a century shows that it is more profitable to pursue a consistent course of right than it is to try to serve any and every master that offers a tempting price."

Christian Science in Ireland.—The *Lancet* states that the estimate of Christian Science which has been arrived at by the Irish people has been formulated in the *Freeman's Journal*. "The Research Defence Society and its able exponent, Mr. Stephen Paget, have rarely been exhibited in a better setting than in an article which bears the title, 'Unchristian Folly.' The text was furnished by the appearance of Mr. Paget's recent 'work exposing the methods of the pseudo-science that has annexed the name of Christianity as a covering to its callous obstinacy and folly,' and the quotation shows that the writer of the article minces no words. He alludes to persons who are 'lacking the sound basis of a training in logic or in the principles of evidence, who because of that lack find in their education their worst enemy. Opened, by what they call their education, to the attraction of intellectual dabblings, anxious to have intellectual sensations, unable to see life as a concrete whole, supremely able to ignore half its facts if only they get a pseudo-intellectual leading towards mystic fancyings, they expose themselves to follies which the uneducated and the well-educated alike reject with loathing. These people, the crudely emotional, the entirely credulous, unbalanced, half-blind, seem to be one of the great unforeseen dangers of modern society.' The view here so forcibly enunciated exposes one of the painfully conspicuous results of education at its present point."

The Alcohol Problem and Its Relation to Life.—The American Association for the Study of Alcohol and Other Narcotics is the first association organized in this country to make a scientific study of the alcohol problem. The papers read at its semiannual meeting in Washington, D. C., March 17-19, 1909 (published as Senate Document No. 48, Sixty-first Congress) give the latest conclusions on this subject, and cover it from almost every angle. There are papers giving conclusions from recent laboratory researches on the action of alcohol on cell and tissue; papers on special causes and conditions favorable to the growth of alcoholic inebriety; on questions of responsibility and the public care of inebriates; papers discussing general and special forms of treatment; and papers relating to the alcoholic problem in its sociologic, physiologic and medical aspects. Among those who have contributed studies are Howard A. Kelly, Winfield S. Hall, H. W. Wiley, J. H. Kellogg, W. B. Parks, T. D. Crothers, Henry O. Marcy and G. Alfred Lawrence. Doctors come into peculiar first-hand relationship with the alcohol question in all its phases, and they should be thoroughly informed on the results of its scientific study. The pamphlet represents the first transactions of a medical society ever published by the government. The pamphlet may be had free on application to senators or representatives.

Sleeping Sickness.—Sir Archibald Geikie in his presidential address at the anniversary meeting of the Royal Society of Great Britain, Nov. 30, 1909, enumerated several papers on sleeping sickness which had been transmitted by Sir David Bruce of the society's commission to investigate sleeping sickness in Uganda. One of these contains an account of an experiment carried out by the commission, confirming the important conclusion of Dr. Kleine that the tsetse fly, *Glossina palpalis*, may retain its infectiveness for a considerable period after it has fed on an infected animal instead of losing it in forty-eight hours, as was previously supposed when it was considered as simply a mechanical carrier of the disease. Sir David Bruce has found that the duration of infectivity may be as long as seventy-five days, thus rendering it necessary to revise the previous ideas in this regard and to modify the measures that have been recommended for the prophylaxis of the disorder.

Custodial Care of Advanced Cases of Inebriety.—A constructive plan for the whole problem of the treatment of public intoxication should include: 1. An adequate system of identification, to determine whether the man is an occasional or a habitual offender. 2. A graded series of remedies which would aim to treat each grade of offenders in a way best adapted to their needs and which would also serve to separate hardened and confirmed cases from incipient and hopeful cases. 3. Increased probationary oversight in all cases in which hope of improvement is offered thereby. 4. Provision for commitment of chronic drunkards on proper medical certification without the necessity of being arrested and haled before a court. 5. Farm colonies for habitual alcoholism, where the inmates shall be required to work. Such a plan would afford some return to the state in men living in wholesome surroundings, largely self-supporting. The present expenditure is sheer loss. —B. B. Burritt, assistant secretary of State Charities Aid Association, New York, in *Hygiene and Physical Education*.

Association News

THE SCIENTIFIC EXHIBIT

Notice of Awards of Prizes and Plans for St. Louis Exhibit

The Scientific Exhibit for the coming session of the American Medical Association at St. Louis, should be worthy of the occasion and should compare favorably with previous exhibits. It is, of course, incumbent on the Middle West and South to come manfully to its support. Institutions or individuals in the far East or the far West are also urged to send small serial exhibits, or rare individual specimens, such as might be carried in a suit-case.

Besides the usual exhibits relating to anatomy, pathology, physiology, etc., it is desired to encourage exhibits bearing on clinical medicine and surgery, such as hospital records well illuminated by photographs of patients, drawings, etc. Exhibits are also welcome, bearing on hygiene and sanitary science, or on any matter concerning which the public should receive judicious medical instruction. It is further urged that medical teachers present exhibits illustrative of newer methods in teaching or as evidence of superior work done by medical students.

To encourage participation in this department of the Association work, the policy of the past two years will be followed in making awards for superior exhibits.

Certificates of honor will be given to a very limited number of exhibitors.

Medals will be given, a gold medal for best research exhibit relating to some phase of pathology or internal medicine, and a gold medal for best research exhibit with bearing on clinical surgery.

A committee appointed by the President of the Association at the time of the session will have entire power in making the awards and may refuse to grant medals if, in its judgment, the exhibits are not of sufficient merit to be entitled to them. FRANK B. WYNN, Director, Indianapolis.

The Public Service

Medical Department of the Army

Changes for the week ended Feb. 12, 1910:

McDiarmid, N. L., lieut., granted 10 days' leave of absence.

Merrick, John N., 1st lieut., M. R. C., on arrival at San Francisco, will proceed to Benicia Arsenal, Cal., for duty.

Hughes, M. E., 1st lieut., M. R. C., relieved from duty at Benicia Arsenal, Cal., and ordered to Fort Rodman, Mass., for duty.

Ford, Clyde S., major, relieved from duty at Fort Logan, Colo., and ordered to Fort William Henry Harrison, Mont., for duty.

Pierson, Robert H., capt., left Fort William Henry Harrison, Mont., on 30 days' leave.

Adair, George F., 1st lieut., M. R. C., resignation accepted Feb. 6, 1910.

Dolley, Gilman C., 1st lieut., M. R. C., assignment in the laboratory, Surgeon General's Office, is extended to Feb. 21, 1910.

Brown, Wilmont E., 1st lieut., M. R. C., sick leave extended 6 months.

Pillsbury, Henry C., lieut., on expiration of leave of absence will proceed to Jefferson Barracks, Mo., for duty.

The following-named officers of the Medical Corps and of the Medical Reserve Corps are relieved from duty at stations designated after their respective names, will proceed to San Francisco, and take the

transport to sail from that place about June 5, 1910, for duty in the Philippine Islands: Captain Junius C. Gregory, Medical Corps, Jefferson Barracks, Mo.; Captain Ernest G. Bingham, Medical Corps, Fort Mason, Cal.; Captain Haywood S. Hansell, Medical Corps, Fort Snelling, Minn.; Captain Craig R. Snyder, Medical Corps, Fort McHenry, Md.; Captain William P. Banta, Medical Corps, Fort D. A. Russell, Wyoming; 1st Lieut. Ernest F. Slater, Medical Reserve Corps, Fort Mansfield, R. I.; 1st Lieut. Charles H. Stearns, Medical Reserve Corps, Fort Screven, Ga.; 1st Lieut. Frederick H. Sparrenberger, Medical Reserve Corps, Fort Warren, Mass., and 1st Lieut. William H. Tukey, Medical Reserve Corps, Boise Barracks, Idaho.

The following named officers of the Medical Corps and the Medical Reserve Corps, relieved from duty in the Philippines Division, will proceed from Manila, P. I., about June 15, 1910, to San Francisco, and on arrival will report by telegraph to The Adjutant General of the Army, for orders: Captain Levy M. Hathaway, Medical Corps; Captain William R. Eastman, Medical Corps; Captain Nelson Gapen, Medical Corps; 1st Lieut. William E. Hall, Medical Reserve Corps; 1st Lieut. James B. Pasco, Medical Reserve Corps.

Pierson, Robert H., capt., relieved from duty at Fort William H. Harrison, Mont., and ordered to Vancouver Barracks, Wash., for duty.

Mills, Robert H. D. S., reports for temporary duty at Fort Terry, N. Y.

Griffis, Frank C., 1st lieut., M. R. C., relieved from duty at Fort Sheridan, Ill., and ordered to Fort D. A. Russell, Wyo., for duty.

Truax, Jesse P., 1st lieut., M. R. C., relieved from duty at Fort Ward, Wash., and ordered to proceed to San Francisco, and take transport to sail from that place about March 5, 1910, for duty in the Philippine Islands.

Haley, James C., 1st lieut., M. R. C., honorably discharged from the service of the United States from this date, his service being no longer required.

Woodson, Robert S., major, ordered to proceed to the Walter Reed General Hospital, Takoma Park, D. C., for observation and treatment.

Robinson, James L., cont. surgeon, ordered to Vancouver Barracks, Wash., for duty.

O'Connor, Roderic P., major, ordered to Fort Huachuca, Ariz., for temporary duty, until May 1, 1910, when he will proceed to Fort Screven, Ga., as heretofore ordered.

Truax, Jesse P., 1st lieut., M. R. C., granted 20 days' leave of absence.

Whitney, Walter, 1st lieut., M. R. C., ordered with troops from Fort McPherson, Ga., to Tampa, Fla., for duty during celebration to be held in that city Feb. 12 to 26, commemorating commencement of work on the Panama Canal.

Ames, John R., dental surgeon, reports for temporary duty at Fort Yellowstone, Wyo.

Gunckel, George J., dental surgeon, reports for temporary duty at Fort Morgan, Ala.

Heterick, Robert H., 1st lieut., M. R. C., orders to the Philippine Islands revoked.

Appel, Aaron M., col., promoted to, with rank from Jan. 28, 1910.

Bradley, Alfred E., lieut. col., promoted to, with rank from Jan. 28, 1910.

Brooke, Roger, Jr., major, promoted to, with rank from Jan. 28, 1910.

Mills, Robert H., dental surgeon, relieved from duty at Fort Adams, R. I., and will proceed to San Francisco, and take the transport to sail from that place about June 5, 1910, for the Philippine Islands, and on arrival at Manila will report to commanding general, Philippines Division, for assignment to duty.

Wolven, F. Homer, dental surgeon, relieved from duty in the Philippines Division and will proceed on the transport to sail from Manila, P. I., on or about June 15, 1910, to San Francisco, and on arrival will report by telegraph to The Adjutant General of the Army for further orders.

Stayer, Morrison C., lieut., ordered to report to medical superintendent, Army Transport Service, San Francisco, for duty as surgeon of the transport *Sherman*, instead of the transport *Thomas*, on its next voyage to the Philippine Islands, about April 5, 1910. On arrival at Manila, to report to the commanding general, Philippines Division, for assignment to duty.

Public Health and Marine-Hospital Service

Changes for the fourteen days ended Feb. 9, 1910:

Carter, H. R., surgeon, granted 1 month's leave of absence from Feb. 5, 1910, on account of sickness.

Wertenbaker, C. P., surgeon, detailed to attend the meeting of the Board of Directors of the Virginia State Antituberculosis Association, to be held in Richmond, Va., Feb. 2, 1910.

Oakley, J. H., surgeon, directed to report to the Commanding Officer of the Revenue Cutter *Tahoma* for temporary duty.

Ramus, Carl, P. A. surgeon, granted 4 days' leave of absence from Jan. 25, 1910, under paragraph 191, Service Regulations.

Amesse, J. W., P. A. surgeon, granted 1 month's leave of absence from Feb. 3, 1910.

Long, J. D., P. A. surgeon, directed to proceed to Columbia, S. C., and vicinity, on or about Feb. 15, 1910, on special temporary duty.

Spratt, Robert D., P. A. surgeon, on being relieved by Assistant Surgeon R. A. C. Wollenberg, directed to proceed to Ellis Island, N. Y., and report to the Chief Medical Officer for duty.

Wollenberg, R. A. C., asst.-surgeon, on the expiration of present leave of absence, relieved from duty at San Francisco, and directed to proceed to Brunswick Quarantine Station, Brunswick, Ga., and assume command.

Delgado, J. M., acting asst.-surgeon, granted 13 days' extension of leave from Jan. 14, 1910, on account of sickness.

Mason, Wm. C., acting asst.-surgeon, leave of absence for 3 days from Jan. 26, 1910, revoked.

Wetmore, W. O., acting asst.-surgeon, granted 2 days' extension of leave from Jan. 19, 1910, on account of sickness, and 3 days' extension of leave from Jan. 27, 1910, on account of sickness.

Amesse, J. W., P. A. surgeon, resignation accepted by the President, to take effect March 2, 1910

Queries and Minor Notes

DATA WANTED ON SURGICAL TREATMENT OF TYPHOID

To the Editor:—I am collecting a list of cases of typhoid fever in which operative procedure has been instituted during its course. I have looked through all the articles that have appeared in THE JOURNAL for the last few years, and have practically all the cases recorded in American literature. There must, however, be a number of cases which have not yet been recorded, and I should be glad to hear from any one who has had such cases.

A. C. STOKES, Omaha.

COLORIMETRIC TEST FOR SALICYLIC ACID

To the Editor:—In THE JOURNAL, Aug. 21, 1909, page 662, an article by Faik and Tedesko is abstracted. Please describe the colorimetric technic used in testing for salicylic acid in this connection.

W. POETER, Poughkeepsie, N. Y.

ANSWER.—The sputum, slightly acidified, was thoroughly shaken with five times its volume of 96 per cent. alcohol. The albumin and mucus forming substances precipitated in coarse flakes and could easily be separated by filtration from the alcoholic extract. The residue on the filter when boiled with acid alcohol in a reflux condenser gave scarcely a trace of a reaction for salicylic acid. The clear filtrate was evaporated on the water bath, a weak alkaline reaction being maintained and the residue taken up with water, slightly acidified and decomposed with lead acetate. The precipitate was separated by filtration, washed, and the acid filtrate shaken with ether. The ethereal residue was taken up in 10 c.c. of water and 1 c.c. of a 10 per cent. ferric chlorid solution added to it. Traces of salicylic acid could be recognized by this method. If the reaction was strongly positive dilutions were made so as to facilitate a comparison of the intensity of coloration. The color of the diluted solution should be compared with that given by a dilute standard solution of sodium salicylate very slightly acidulated. Estimates made by the above method while they may suffice for many clinical purposes are mere approximations and are not sufficiently accurate for strict scientific work.

THE CHOLOGEN PREPARATIONS

To the Editor:—What are the chologen preparations, and what is their action supposed to be? A stomach specialist gave a friend of mine chologen No. 1 to take one tablet 1, 2 or 3 times a day, according to the number of daily evacuations. He did so and came to me after two or three weeks in a very depressed condition, gave a history of having had attacks during which he came near fainting, was cold, with cold perspiration, etc.

W. R. HUMPHREY, Stillwater, Minn.

ANSWER.—Chologen tablets are said to consist of a mixture of mercury (calomel), podophyllin, melissa, menthol, camphor and caraway in different proportions and are made in three forms called chologen 1, 2, and 3. In the advertising matter put out by the manufacturers various explanations are given of their action. The remedy is said to alter the nature of the bile and it is intimated that it makes the bile capable of dissolving gall-stones. One writer claims that cholelithiasis is a nervous disease and that chologen is the remedy to regulate the nervous system of the liver. The method of treatment prescribed is objectionable because, while the tablets contain only well-known remedies, the specious claim is made that the special combination gives them a peculiar value. The tablets are put up in such a way and accompanied by such directions as virtually to take away from the physician all control over the treatment and to make him merely the agent of the manufacturer. It is uncertain whether or not the bad effects noted in the above communication were due to the medicine taken, but so long as a physician prescribes a mixture containing unknown substances in unknown quantities he cannot be sure that the symptoms are not due to that mixture.

LITERATURE ON RADIUM—USE OF THE INDEX

To the Editor:—Please furnish me with references to recent articles or abstracts of articles on the uses of radium in medicine and surgery.

G. W.

ANSWER.—THE JOURNAL has already printed an elaborate list of references to recent articles and abstracts of articles on this subject. Twice a year, that is, in the concluding number of each volume, is published an Index to Current Medical Literature. For example, in THE JOURNAL, Dec. 25, 1909, page 2257, is almost half a column of references to radium. Some of these are original articles in THE JOURNAL and some are abstracts, but reference to the page on which the abstracts occur will show the source of the original publications. Subsequent to the publication of this index we cite the following references:

Abbe, R.: Radium as a Specific in Giant-Cell Sarcoma, *Med. Rec.*, Jan. 1, 1910; abstr. in THE JOURNAL, Jan. 15, 1910, p. 235.

Turner, D.: Effect and Use of Radium, *Lancet*, London, Dec. 25, 1909; abstr. in THE JOURNAL, Jan. 22, 1910, p. 324.

Chevrier, L.: Radium in Cancer, *Presse méd.*, Dec. 18, 1909.

Wickham, L.: Is Radium a Cure for Cancer? *Brit. Med. Jour.*, Dec. 18, 1909; abstr. in THE JOURNAL, Jan. 15, 1910, p. 241.

Jordan, A. C.: Use of Radium for Local Applications within the Body, *Lancet*, London, Dec. 11, 1909.

Dieffenbach, W. H.: Radium Therapy in Inoperable Tumors, *Jour. Advanced Therap.*, December, 1909.

Cheron, H.: Radium Treatment of Gynecologic Disease, *Obstétrique*, November, 1909.

EXAMINATION OF STOMACH CONTENTS

To the Editor:—The writers on stomach diseases urge a more general employment of the stomach tube as a routine procedure in general examinations. The books on laboratory diagnosis devote many pages to the chemical examination of stomach contents which is necessary to make the use of the stomach tube of value. It is obvious that this involves a laboratory equipment and expenditure of time which cannot be afforded by the busy practitioner, especially if he practices in the country. Is there not some short cut or some method of arriving at a diagnosis without so much trouble?

Enquirer, Cincinnati.

ANSWER.—Stomach specialists and the writers on laboratory diagnosis have unintentionally made the subject of the examination of stomach contents appear much more complicated than it really is. It is a mistake to suppose that the utility of the stomach tube in diagnosis is limited to the obtaining of stomach contents for chemical and microscopic examination. The examination of the contents with the naked eye furnishes much valuable information in a moment. One should note whether there is mucus mixed with the food, indicating gastritis, or blood which may be indicative of gastric ulcer. The presence of remnants of food from previous meals may be manifest at a glance. A very liquid content shows that there is either retention from motor insufficiency or hypersecretion. By noting the presence of a layer of very fine particles of starch, one can be almost certain that free hydrochloric acid is present. On the other hand, if the contents are in lumps and there is very little liquid, it is probable that digestion has not taken place, in consequence of the absence of hydrochloric acid. The time required for the chemical examination necessary for clinical purposes is very small. As a rule the necessary examination can be made in five minutes. The reason for this is that it has been shown that in certain cases we may omit many of the tests because we know either that the substance to be tested for is never present under the conditions already found or we may assume its presence because of one of the tests previously made. Thus, if free hydrochloric acid is found after the Ewald test meal there is no need to test for lactic acid. Indeed, as Cohnheim says, lactic acid should be tested for only in cases in which there is stagnation of the stomach contents. When free hydrochloric acid is present there is no need to test for the ferments. Therefore, in examining a specimen of stomach contents if Congo paper turns blue there is practically no need for any other examination except to determine the amount of free hydrochloric acid.

The equipment necessary for ordinary examinations of stomach contents is very small. Besides the ordinary stomach tube, one needs a 10 c.c. graduated cylinder, a 25 c.c. burette, a beaker, an evaporating dish and some test tubes; a graduated pipette might also be included. Fairly correct decinormal solution can be purchased at small cost. The physician who has no incubator can readily perform experiments for determining the amount of ferment by keeping a large amount of water in an ordinary dish pan at constant temperature by means of a small flame. We do not mean to say that cases may not arise in which more elaborate apparatus and more careful testing will be required, but the above will suffice for the majority of stomach cases and will enable the physician to obtain information by which he can base his treatment on ascertained facts instead of depending merely on symptoms, which are so uncertain as to make the treatment based on them, largely guess work.

Methods designed to facilitate the diagnosis of stomach diseases without the use of the stomach tube have been repeatedly devised, but for the most part have not justified their use in practice as reliable methods. The most recent of these is Sahli's desmoid test, described in THE JOURNAL, June 3, 1905, p. 1820, and Sept. 26, 1906, p. 975. This method is convenient, but by many is considered unreliable. At any rate, it cannot give any information as to the amount of free hydrochloric acid, a fact that is often the principal factor in determining the treatment. Much can be learned regarding the condition of the stomach from the examination of the feces but this is more troublesome to the physician than the examination of the stomach contents.

FELLOWSHIPS AND PRIZES IN MEDICINE

To the Editor:—What prizes for medical work, research or clinical, are offered for the competition of American physicians?

J. G. M. B.

ANSWER.—A partial list of prizes and fellowships is given below. More complete information concerning each may be had by looking up THE JOURNAL reference given. The prizes given by the French Academy of Medicine are grouped together.

KUSSMAUL PRIZE: awarded every 3 years by Professor Czerny for the best therapeutic achievement, first published in German literature; a medal and $250 in money. (THE JOURNAL, Jan. 6, 1906, p. 50.)

WALKER PRIZE, JACKSONIAN PRIZE, CARTWRIGHT PRIZE: awarded by Hospital P. & S., London, subjects assigned. (THE JOURNAL May 12, 1906, p. 1458.)

FLUCKINGER MEDAL: awarded by the German Apothecaries' Union every 5 years for achievements in pharmacology. (THE JOURNAL, Oct. 19, 1907, p. 1377.)

ALVARENGA PRIZE (Philadelphia): awarded every year for best essay on any topic in medicine; $180. (THE JOURNAL, Nov. 2, 1907, p. 1536.)

NOBEL PRIZES: (THE JOURNAL, Dec. 28, 1907, p. 2161.)

GERMAN COLONIAL SOCIETY PRIZE: for best method of protection of cattle against tsetse fly; $1,500. (THE JOURNAL, March 28, 1908, p. 1051.)

RIBERI PRIZE: $4,000. Awarded by the Academy of Medicine at Turin, for the best work or discovery made in the field of the medical sciences in the five years ending with 1911. Published work or manuscripts can be entered in competition, but they must be in Italian, French or Latin. Address the Segretario generale della R. Accademia di Medicina, Turin, Italy.

BRESSA PRIZE: awarded every four years by the Academy of Sciences, Turin, for the most important scientific discovery during the interval; $2,000. (THE JOURNAL, April 4, 1908, p. 1132.)

CANIZZARO PRIZE: awarded by the Academy of Sciences, Rome, for the best work on pure and applied chemistry; $2,000. (THE JOURNAL, July 11, 1908.)

SCHAUDINN MEDAL: for achievements in microbiology. (THE JOURNAL, July 24, 1909, p. 308.)

CANCER RESEARCH PRIZES: awarded by German Central Committee; $250, $125 and $75. (THE JOURNAL, Oct. 23, 1909, p. 1411.)

NATIONAL ACADEMY PRIZES: given by Mexican Government for work in typhus; $25,000. (THE JOURNAL, Nov. 20, 1909, p. 1751.)

COZZOLINO PRIZE: for work in the relief of deafness, to be presented at the International Otology Congress at Boston, 1912; $200. (THE JOURNAL, Nov. 20, 1909, p. 1751.)

GOLDBERGER PRIZE: awarded every 3 years by the Imperial Royal Society of Physicians, Vienna, for research in experimental medicine, 2,000 crowns. (THE JOURNAL, Dec. 4, 1909, p. 1922.)

GEORGE CROCKER CANCER RESEARCH FUND: under supervision of Columbia University, New York; for research only; $1,500,000. (THE JOURNAL, Dec. 18, 1909, p. 2108.)

MARY JACOBI RESEARCH FUND: awarded by the Women's Medical Association of New York; $800 fellowship open to women graduates for graduate research work. (THE JOURNAL, Jan. 1, 1910, p. 60.)

BEIT MEMORIAL FELLOWSHIPS: to persons of European descent, graduates of British colleges; $1,250 per year each. (THE JOURNAL, Jan. 15, 1910, p. 217.)

BARBIER PRIZE: awarded by Paris Medical School; $400. (THE JOURNAL, Jan. 22, 1910, p. 302.)

JEUNESSE PRIZE: awarded by Paris Medical School; $300. (THE JOURNAL, Jan. 22, 1910, p. 302.)

FRENCH ACADEMY OF MEDICINE PRIZES: Twenty-five prizes are offered by the French National Academy of Medicine for international competition in 1911, representing a total value of about $8,000, besides the great Audiffred prize of bonds representing an annual income of $4,800, offered for a sovereign cure or effectual preventive of tuberculosis. Some of the prizes are triennial, so that in 1912 the number is 29, totaling nearly $9,000. Competing works must be in French or Latin and be received by the secretary of the Academy before March 1 of the year in question. The subjects for 1910 are not given as there is not sufficient time before they are due. The conditions for competition were related at some length in THE JOURNAL, Dec. 28, 1907, p. 2161, and the awards at the last distribution were mentioned recently in the Paris letter, Jan. 1, 1910, p. 61. For further particulars address the Secrétariat de l'Academie de Medecine, 16 Rue Bonaparte, Paris, France.

FRENCH SURGICAL SOCIETY PRIZES: The following are to be awarded in 1910. The competing works should be addressed to the Secrétaire général de la Société nationale de chirurgie, 12, rue de la Seine, Paris, France. They must be received before Nov. 1, 1910. Articles offered for the Laborie prize must be anonymous and accompanied by an epigraph reproduced on the outside of an envelope enclosing the candidate's name, address and credentials.

DUBREUIL PRIZE: $80, for a work on orthopedics.

LABORIE PRIZE: $600, for an unpublished work on some surgical subject.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CONNECTICUT: Regular: City Hall, New Haven, March 8-9. Sec., Dr. Charles A. Tuttle. Homeopathic: New Haven, March 8. Sec., Dr. Edwin C. M. Hall, 82 Grand Avenue. Eclectic: 42 Meadow St., New Haven, March 8. Sec., Dr. T. S. Hodge, Torrington.

MAINE: Portland, March 8-9. Sec., Dr. Frank W. Searle, 806 Congress Street.

MASSACHUSETTS: State House, Boston, March 8-10. Sec., Dr. Edwin B. Harvey.

Delaware December Report

Dr. H. W. Briggs, secretary of the Medical Council of Delaware, reports the written examination held at Dover and Wilmington, Dec. 14-16, 1909. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 7, of whom 6 passed and 1 failed. The following colleges were represented:

College	PASSED Year Grad.	Per Cent.
Atlantic Medical College	(1909)	82
Baltimore Medical College	(1907)	75
University of Pennsylvania	(1908)	92.7
Jefferson Medical College	(1909)	83.4
University of Pennsylvania	(1908)	85.4
Hahnemann Med. Coll. and Hospital, Philadelphia	(1908)	88
FAILED		
Medico-Chirurgical College, Philadelphia	(1909)	70.2

Virginia December Report

Dr. R. S. Martin, secretary of the Medical Examining Board of Virginia, reports the written and oral examination held at Lynchburg, Dec. 14-17, 1909. The number of subjects examined in was 9; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 43, of whom 22 passed, including one non-graduate, and 21 failed. Eight candidates were licensed through reciprocity. The following colleges were represented:

College	PASSED Year Grad.	Per Cent.
Howard University, Washington, D. C.	(1909)	76, 76
Kentucky School of Medicine	(1908)	75, 76
Johns Hopkins University	(1906)*	
Baltimore Medical College	(1909)	75
Woman's Medical College of Baltimore	(1908)	83
University of the City of New York	(1894)*	
University of Pennsylvania	(1893)*	
Medico-Chirurgical College, Philadelphia	(1909)	76
Chattanooga Medical College	(1907)	75
University of the South	(1907) 75; (1909)	75
University College of Med., Richmond	(1908) 79; (1909)	75
Medical College of Virginia	(1909)	75, 78
University of Virginia	(1908) 76; (1909)	75, 79
University of Edinburgh, Scotland	(1901)*	
FAILED		
University of Louisville	(1909)	64, 74
University of Maryland	(1909)	72
Maryland Medical College	(1909)	66, 71, 73, 55
Med.-Chir. Coll. of Christ's Institution, Baltimore	(1908)	
University of Tennessee	(1891)*	
Meharry Medical College	(1894)*	
Chattanooga Medical College	(1905)	51
Memphis Hospital Medical College	(1909)	68
University of the South	(1908) 58, 74; (1909)	68
University of Virginia	(1908) 69.1, 71; (1909)	72, 74
Medical College of Virginia	(1908) 74; (1909)	71
Queen's University, Kingston, Ontario	(1897)*	

College	LICENSED THROUGH RECIPROCITY Year Grad.	Reciprocity with
Louisville and Hospital Medical College	(1908)	Kentucky
New York Homeopathic Med. Coll. and Hospital	(1908)	New Hamp.
North Carolina Medical College	(1905)	N. Carolina
Univ. of Pennsylvania	(1897)	North Carolina
University of Nashville	(1907)	Dist. Columbia
University College of Medicine, Richmond	(1908)	N. Carolina

* Took oral examination.

Maryland December Report

Dr. J. McP. Scott, secretary of the Maryland Board of Medical Examiners, reports the written examination held at Baltimore, Dec. 14-17, 1909. The number of subjects examined in was 9; percentage required to pass, 75. The total number of candidates examined was 42, of whom 30 passed and 12 failed. Nine candidates were licensed through reciprocity and 2 under exemption clauses and by special examination. The following colleges were represented:

College	PASSED Year Grad.	Per Cent.
Howard Univ., Washington, D. C.	(1908) 77; (1909)	79
Johns Hopkins University	(1907)* (1909)	93
University of Maryland	(1907)* (1908)* (1908) 77; (1909) 75, 77, 79, 80, 81, 90.	
Baltimore Medical College	(1906)* (1909)	85
College of Physicians and Surgeons, Baltimore	(1904)* (1908) 85, 88; (1909) 83.	
Maryland Medical College	(1906)*	
University of Michigan, College of Medicine	(1898)	84
Jefferson Medical College, Philadelphia	(1909) 80,	82
Temple University, Philadelphia	(1909)	77
University of Pennsylvania	(1908) 80, 87; (1909)*	
University of the South	(1909)*	
University of Virginia	(1905)	84
McGill University, Montreal, Canada	(1909)	82
FAILED		
George Washington University	(1907)*	
Howard University, Washington, D. C.	(1908)	70
Louisville Medical College	(1908)	60
University of Maryland	(1909)*	
Baltimore Medical College	(2, 1909)* (1909)	72
Maryland Medical College	(1908)* (3, 1909)*	
University of the South	(1908)*	

College	LICENSED THROUGH RECIPROCITY Year Grad.	Reciprocity with
George Washington University	(1908)	W. Virginia
Howard University, Washington, D.C.	(1896)	Dist. Colum.
Maryland Medical College	(1904)	Georgia
College of Physicians and Surgeons, Baltimore	(1904)	W. Virginia
University of Michigan College of Medicine	(1875)	Dist. Colum.
Medical College of Ohio	(1895)	Ohio
University of Pennsylvania	(1893)	W. Virginia
Vanderbilt University	(1881)	Kentucky
Milwaukee Medical College	(1900)	Wisconsin

College	LICENSED UNDER EXEMPTION CLAUSE AND BY SPECIAL EXAMINATION Year of Grad.
University of Maryland	(1885)
University of Gratz, Styria, Austria	(1900)

* Re-examined.

California December Report

Dr. Charles L. Tisdale, secretary of the Board of Medical Examiners of the State of California, reports the written examination held at Los Angeles, Dec. 7-10, 1909. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 97, of whom 66 passed, including 8 osteopaths, and 31 failed, including 8 osteopaths. The following colleges were represented:

College	PASSED Year Grad.	Per Cent.
College of Physicians and Surgeons, Los Angeles	(1909) 81.7,	87.3
College of Physicians and Surgeons, San Francisco	(1906)	76.1
Hahnemann Medical College of the Pacific	(1903) 84.1; (1908) 81.4, 82.3.	
Cooper Medical College	(1908) 75.6, 79.6; (1909)	75.4
University of Southern California	(1905) 86.7; (1907) 75,	86.2; (1909) 77.1, 80.5, 81.4, 82.9, 87.2.
Yale Medical School	(1906)	87.6
Denver and Gross College of Medicine	(1904)	86.4
Medical College of Georgia	(1883)	83.8
Hahnemann Medical College and Hospital, Chicago	(1886) 87.2; (1891) 82.7; (1898) 80.7; (1901) 78.3.	
Northwestern University Medical School	(1898) 80.5; (1907) 80.3; (1909) 85.4.	
Rush Medical College	(1889) 88.2; (1908) 97.5; (1909)	87.4
College of Physicians and Surgeons, Chicago	(1909) 82.1,	86.2
State University, Iowa	(1885)	85.5
University of Kansas	(1909)	85.4
Johns Hopkins University	(1908)	85.8
University of Maryland	(1903)	81.2
Boston University	(1895)	83.9
Harvard Medical School	(1891) 81.4; (1898) 75.6; (1902)	75.1
Tufts College Medical School	(1907)	81.9
University of Michigan, Coll. of Med.	(1891) 79; (1902)	81.3
University of Michigan, Homeopathic College	(1908)	83.4
Univ. of Minnesota, Coll. of Med.	(1894) 90.9; (1908)	75
Homeopathic Medical College of Missouri	(1898)	80
Marion-Sims College of Medicine	(1897)	83.9
Cornell University Medical College	(1909)	85.5
New York Homeopathic Med. Coll. and Hospital	(1905)	75.2
Jefferson Medical College	(1893) 80; (1895)	80
Hahnemann Medical College, Philadelphia	(1901)	75
Starling Medical College	(1902)	80.1
Medico-Chirurgical College, Philadelphia	(1901)	80.6
McGill University, Quebec	(1905)	76.3
Western University, London, Ontario	(1899)	84.4
University of Heidelberg, Germany	(1907)	89.6
FAILED		
University of Southern California	(1908)	71.7
Coll. of Physicians and Surgeons, San Francisco	(1902) 42.9; (1906) 72.7; (1907) 71; (1909) 66.5.	
Cooper Medical College	(1908) 71.8; (1909)	68.1
College of Physicians and Surgeons, Chicago	(1904)	49.4
Rush Medical College	(1895)	67.8
Northwestern University Women's Medical School	(1890)	73.5
College of Physicians and Surgeon, Keokuk	(1880)	43.8
Kentucky School of Medicine	(1889) 66.8, 71.2; (1894)	69.7
University of Maryland	(1909)	68.4
Michigan College of Medicine, Detroit	(1881)	19.6
University of Michigan, Coll. of Med.	(1880) 56.8; (1895)	71.5
Kansas City Medical College	(1891)	76.2
Jefferson Med. Coll.	(1890) 73; (1894) 69.4; (1895)	59.6
University of Turin, Italy	(1899)	18.7

Marriages

LOUIS A. GREENSFELDER, M.D., to Miss Ethel Grace Rooks, both of Chicago, February 7.

WUNIBALD JOHN PROBST, M.D., to Miss Magdalene Elizabeth Lingenfelser, both of Pittsburg, Pa., February 3.

ALFRED G. FARMER, M.D., Corozal, C. Z., to Miss Minnie L. Cuckler, of Athens, Ohio, at Cristobal, C. Z., January 20.

WILLIAM JOSEPH CIRCE, M.D., Carson City, Nev., to Miss Ella Dudley, of San Francisco, at Reno, Nev., February 1.

GEORGE ELMER KROUT, M.D., Jacobus, Pa., to Miss Beulah Hildebrand, of Loganville, Pa., at Bloomsburg, Pa., January 6.

Deaths

Frederick Wentworth Mercer, M.D. College of Physicians and Surgeons, New York City, 1862; a member of the American Medical Association, British Medical Association, American Microscopical Association; vice-president of the Illinois Microscopical Society; and a fellow of the Royal Microscopical Society of England; major and surgeon of the Twentieth Massachusetts Volunteer Infantry during the Civil War; for some time medical superintendent of the Illinois State Soldiers' Home; assistant physician at the Anna State Hospital from 1873-1879; died at his home in Chicago, February 9, from heart disease, aged 71.

George Edmund Brickett, M.D. Dartmouth Medical School, 1847; assistant surgeon of the Third and surgeon of the Twenty-first Maine Volunteer Infantry during the Civil War; from 1863-1865 surgeon in charge of the Cony United States General Hospital, Augusta, Maine, and from 1864-1892, attending surgeon to the Kennebec arsenal; from 1874-1888, local pension examining surgeon; representative from Kennebec county in the state legislature in 1868 and 1869; died at his home in Augusta, January 28, from cerebral hemorrhage, aged 85.

John Alfred Westlake, M.D. New York University, New York City, 1877; a member of the Medical Society of the State of New York; a veteran of the Civil War; for two years surgeon to the Northern Central Railroad, and later to the Northern Pacific Railroad in St. Paul, Minn.; since 1886 a resident of Elmira, N. Y.; coroner of Chemung county; for about ten years physician in charge of the Westlake Hospital; died at his home, January 31, from uremia, aged 63.

William A. Gordon, M.D. Rush Medical College, Chicago, 1856; surgeon of the Tenth Wisconsin Volunteer Infantry and later brevet major, U. S. Volunteers, during the Civil War; formerly secretary of the U. S. Army Medical Examining Board of the Army of the Cumberland; a specialist in diseases of the eye, ear, nose and throat; died at his home in Mountain View, Cal., January 28, from senile debility, aged 75.

Ira A. Thayer, M.D. Eclectic Medical Institute, Cincinnati, 1866; surgeon in the volunteer service during the Civil War; for twenty-five years pastor of a church in New Castle, Pa.; and later for several years a lecturer for the State Agriculture Department, and city food inspector of New Castle; died at his home, January 24, from uremia, aged 61.

Raphael Owen Semmes, M.D. University of Alabama, Mobile, 1901; formerly a member of the American Medical Association; a member of the Medical Association of the State of Alabama; health officer of Wilcox county; died at his home in Rock West, Camden, January 20, from chronic nephritis, aged 30.

Andrew S. Russell, M.D. University of Pennsylvania, 1892; a member of the American Medical Association; of Duquesne, Ariz.; was shot and instantly killed January 28, at Washington, a mining camp, twenty miles east of Nogales, by a retired army officer who is believed to be insane, aged 45.

Frederick A. Wright, M.D. Bellevue Medical College, 1871; health officer and a member of the Board of Education of Glen Cove, N. Y., for several years, and postmaster of the city since 1898; died at the home of his daughter in Newark, N. J., January 30, from cancer, aged 63.

Samuel Wexlar, M.D. University of Pennsylvania, 1908; chief resident physician of the Mount Sinai Hospital, Philadelphia, and a member of the Southwark Medical Society; died February 1, in the Mount Sinai Hospital, two days after an operation for appendicitis, aged 28.

Francis McConnell Christy, M.D. University of Pennsylvania, 1882; of Altoona, Pa.; a member of the Medical Society of the State of Pennsylvania; for several years surgeon in the National Guard; died at the home of his father-in-law in Lancaster, Pa., January 29, aged 50.

Millson Raleigh Allen, M.D. Hahnemann Medical College, Philadelphia, 1887; formerly president of the Virginia Homeopathic Society, and a member of the State Board of Medical Examiners; died at his home in Norfolk, February 2, from bronchial asthma, aged 48.

William Penn Compton, M.D. Georgetown University, Washington, D. C., 1889; professor of laryngology and rhinology in his alma mater; of Washington, D. C.; died suddenly February 1, from angina pectoris while at the bedside of a patient.

James Castle Patterson, M.D. University of Tennessee, Nashville, 1894; of Wanette, Okla.; a member of the Oklahoma State Medical Association; died in a sanatorium at Silver City, N. M., January 28, from tuberculosis, aged 38.

Ernest H. Plasch, M.D. University of Berlin, Germany; formerly of German Valley and Mount Carroll, Ill.; a practitioner of Illinois since 1873; died at the home of his daughter in Mount Carroll, February 3, from dropsy, aged 71.

William H. Blakeley, M.D. Homeopathic Medical College of Missouri, St. Louis, 1866; New York Homeopathic Medical College and Hospital, 1871; died at his home in Bowling Green, Ky., January 25, from acute gastritis, aged 68.

Joseph Theophilus Howard, M.D. Georgetown University, Washington, D. C., 1859; a member of the American Medical Association; died suddenly at his home in Washington, January 30, from pneumonia, aged 77.

William Beall, M.D. Medical Department of Columbian College, Washington, D. C., 1846; from 1872 to 1881, a clergyman of the United Brethren church; died at his home in Rock Gap, W. Va., January 30, aged 88.

Randolph Spalding Kenan, M.D. Atlanta Medical College, 1895; of Savannah; a member of the Medical Association of Georgia; died at the home of his sister in Darien, Ga., February 3, from nephritis, aged 44.

Augustus A. Fahnestock, M.D. Hahnemann Medical College, Chicago, 1865; of Laporte, Ind.; died at the home of his brother in Marion, Ind., February 7, from the effects of a fall down a stairway, aged 76.

William L. White, M.D. University of Oregon, Portland, 1890; of Pullman, Wash.; a member of the Washington State Medical Association; died in Fabiola Hospital, Oakland, Cal., January 26, from tuberculosis.

Rollin B. Gray, M.D. New York Homeopathic Medical College, 1871; of the Borough of Queens, N. Y.; died at the home of his daughter in East Orange, N. J., February 5, from cerebral hemorrhage, aged 69.

Frederick O. Chamberlain, M.D. Yale University, New Haven, 1891; Paris Medical School, 1894; a member of the San Francisco Stock and Exchange Board; died in that city, Dec. 5, 1909, from brain disease.

Thomas A. R. Keech, M.D. University of Maryland, 1856; a member of the Medical Association of the District of Columbia; died at his home in Washington, D. C., January 29, from arteriosclerosis, aged 76.

Thomas M. Graves (license, Ky., 49 years practice, 1893); for more than fifty years a practitioner of Calloway county, Ky.; died at his home in West Murray, January 28, from senile debility, aged 85.

William E. Mattingly, M.D. University of Louisville, 1869; a member of the American Medical Association; died suddenly at his home in Lebanon, February 1, from valvular heart disease, aged 66.

Jeremiah T. Tucker, M.D. Memphis Hospital Medical College, 1892; a member of the Van Zandt County (Texas) Medical Society; died at his home in Wills Point, January 27, from smallpox, aged 47.

Hiram A. Burrows, M.D. Louisville Medical College, 1885; a member of the State Medical Association of Texas; died at his home in New Boston, February 1, from heart disease, aged 45.

Helen Maria Bingham, M.D. Boston University, School of Medicine, 1881; for several years a practitioner of Milwaukee; died at the home of her mother in Monroe, Wis., January 27, aged 65.

Joseph C. Marshall, M.D. University of Pennsylvania, 1870; a member of the Medical Society of the State of New Jersey; died at his home in Tuckahoe, Dec. 1, 1909, from pancreatitis, aged 61.

John H. Fawcett, M.D. Missouri Medical College, St. Louis, 1874; formerly of Grant Park, Ill.; a veteran of the Civil War; died at his home in Ashland, Ore., Feb. 22, 1909, aged 69.

Andrew Harscher, M.D. Marions-Sims Medical College, St. Louis, 1896; a member of the Missouri State Medical Association; died at his home in St. Louis, January 26, aged 43.

William Lawrence Woodruff, M.D. Hahnemann Medical College, Philadelphia, 1882; of Long Beach, Cal.; died at his home February 4, from pulmonary hemorrhage, aged 49.

Weldon Alfred Dickson, M.D. College of Physicians and Surgeons, Baltimore, 1886; died at his home in Salamanca, N. Y., February 3, from rheumatic endocarditis, aged 52.

Laura E. Stockdale, M.D. Chicago Homeopathic Medical College, 1880; one of the early women practitioners of Denver; died at her home in that city, January 27, aged 67.

Arthur A. Browne, M.D. McGill University, Montreal, 1872; for many years a member of the faculty of his alma mater; died at his home in Montreal, January 26, aged 62.

John Adam Fleischer, M.D. University of Virginia, Charlottesville, 1908; died at his home in Meadow Dale, Highland county, W. Va., January 23, aged 29.

Charles B. Davis, M.D. Bennett Medical College, Chicago, 1869; died at the home of his son in Salem, Mo., January 16, from organic heart disease, aged 75.

Henry G. Wheeler (license, Ill., years of practice, 1880); a veteran of the Civil War; died at his home in Breckenridge, Ill., Nov. 21, 1909, aged 67.

Edward W. Day, M.D. University of Maryland, Baltimore, 1853; of Vacaville, Cal.; died in St. Joseph's Hospital, San Francisco, March 25, 1909.

Harry Weston Merrill, M.D. Rush Medical College, 1883; died at his home in Maywood, Ill., February 2, from cerebral hemorrhage, aged 53.

Meade M. Loucks, M.D. University of Pennsylvania, 1895; died in his apartments in Wilkinsburg, Pa., February 2, from pneumonia, aged 45.

Robert S. Payne, M.D. Louisville Medical College, 1871; died at his home in Stamping Ground, Ky., February 2, from brain disease, aged 69.

A. C. Hatfield (license, years of practice, Ill., 1878); died at his home in Adair, January 27, from valvular heart disease, aged 64.

O'Connell Fairhurst, M.D. Bellevue Hospital Medical College, 1870; died at his home in Vincennes, Ind., January 24, from heart disease.

Edward I. Hirschfeld, M.D. Illinois Medical College, 1909; died at the North Shore Health Resort, Winnetka, February 6, aged 44.

William C. H. Henkel, M.D. University of Jena, 1852; died at his home in Baltimore, January 30, from senile debility, aged 82.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

The Legal Status of the Texas Practice Act

The new Texas medical practice act has been upheld in practically all the legal tests to which it has been subjected, as shown in an editorial in the February issue of the *Texas State Journal of Medicine*. The decision in the case of Collins, an osteopath, upheld its constitutionality and decided that all who treat disease, by whatever method, are included in the definition of a medical practitioner. In the case of Morse the board was upheld in refusing a license for fraud and unprofessional conduct. As a result of the Newman case it was decided that a masseur, if holding himself out to treat disease, must have a medical license. This does not interfere with masseurs, however, in their recognized sphere of labor, but does away with a lot of unqualified practitioners. The case of Wickes-Nease vs. Watts brought a decision that the requirement of registration of physicians was not illegal on the ground that it was "retroactive" and that the holder of a certificate to be a legal practitioner must conform to each succeeding requirement of the legislature. In the case of Ray, the board was upheld in its refusal to raise his grade since fraud or discrimination by the board was not proved. The suit of Dr. A. C. Bell to compel recognition of the College of Physicians and Surgeons has been allowed to go by without a cost bond.

Although the new practice act is scarcely two years old, the fact that it has already been put through so many tests is in itself evidence that the new board has been carrying out its provisions. It has been a decided power for good in medical registration and has placed Texas among the leading states in the enforcement of fair educational standards for all practitioners regardless of the methods of treatment to be employed.

Legislative Notes

MASSACHUSETTS

The following bills have been introduced into the Massachusetts legislature: *House Bills:* 134, to require practitioners of Eddyism, hypnotism and certain kinds of healing to register; 182, to make communications between physicians and patients privileged; 192, to authorize persons qualified to practice medicine in other states to practice medicine in Massachusetts; 193, to make members of the Board of Registration in Medicine ineligible to reappointment; 295, to appropriate one thousand ($1,000) for small traveling school tuberculosis exhibits to be used in the public schools throughout the state for instruction in hygiene and the prevention of tuberculosis; 296, to empower city councils to levy a tax for the erection and maintenance of public tuberculosis sanatoria; 386, to extend the duties of the board of education so as to include supervision of medicine, dentistry and pharmacy; 416, to regulate the sale of opium, morphin and other narcotics; 417, to require the State Board of Health to make, free of charge, chemical analyses of preparations suspected of containing cocain, alpha or beta eucain, or any substance submitted to it by the police authorities or charitable organizations, provided the analysis is to be used for the enforcement of the law; 513, to provide for legislation relative to the practice of healing by unregistered physicians—this bill accompanies the petition of the Massachusetts State Association of Spiritualists on this point; 657, to provide for an investigation as to the increase of criminals, mental defectives, epileptics and degenerates; 660, to provide for the prevention of the dissemination of disease through the improper use of wallpaper; 736, to authorize town boards of health to appoint school physicians; 828, to authorize town and city boards of health to vaccinate school children without charge; 887, to provide for the preparation of a code of medical instruction for use in the public schools.

Dr. M. W. Richardson, secretary of the Massachusetts State Board of Health, has submitted a special report on rabies as House Document 236, in which he reports that in 1904 there were no cases of rabies in Massachusetts. In 1905, there were 103 cases; 1906, 337 cases; 1907, 778 cases; 1908, 557; 1909, up to December 1, 168 cases, of which the following number were human: 1905, 12 cases; 1906, 110 cases; 1907, 184 cases; 1908, 134 cases; 1909 up to October 27, 77 cases. From 1905 to 1909 inclusive, 19 human beings have died in Massachusetts of rabies. Dr. Richardson concludes that the disease and the present epidemic reached its maximum in 1907 and is now decreasing. Most of the patients were treated at the State Alms House at Tewkesbury, at the Boston City Hospital or at the Pasteur Institute in New York. The expense has averaged about $20 per case. Dr. Richardson estimates that it would cost the state about $5,000 a year to manufacture and distribute its own serum, while inoculation material could be secured from the United States Public Health and Marine-Hospital Service at an annual expense of about $2,000 a year.

Dr. Richardson also submits a report on food and drug inspection for the year ending 1909, showing a total of 7,337 examinations of food and drugs during the year which resulted in 296 prosecutions. Of these, 267 resulted in conviction, 14 in acquittal, 2 were *nolle-prossed* and 13 were dismissed on motion of the inspector; 18 cases are at present pending on appeal to the superior court. The fines imposed amounted to $566.74. Most of the prosecutions were for the sale of milk below the standard.

The Board of Registration in Medicine submitted its annual report under the title of Public Document 56, showing that

during the previous year 293 persons had applied for registration, all of whom had been examined except 12. Of this number 270 were graduates of medical schools and 23 were undergraduates. Two hundred and sixty-one graduates were examined, of which 220 were registered, 201 by first examination and 19 by reexamination; 41 graduates were rejected.

OHIO

Several medical bills have been introduced into the Ohio legislature, among them a bill to exempt from prosecution any woman who shall testify against a physician as having induced an abortion on her; also a bill to provide for sterilization of criminals and defectives. An antivendors bill, to restrict the free distribution of samples of medicine, as well as a bill to restrict medical advertising in newspapers, have also been introduced. One of the most important is a bill to authorize the Ohio State Board of Health to distribute free antitoxin.

MISSISSIPPI

The legislative committee of the Mississippi State Medical Association has secured the introduction of a bill to provide for the collection and recording of vital statistics in all cities and towns in the state having a population of 1,000 or over. Provision is made for a certificate of death of the standard form, to be filed with the local registrar by the undertaker, a burial permit being issued thereon. The bill is entirely satisfactory so far as it goes. It was the judgment of the legislative committee that it was not wise to advocate vital statistics legislation covering the entire state but that it would be well to inaugurate it first in cities of 1,000 and over, and later, if desirable, to extend its operation to the rural districts. It is earnestly hoped that this bill will pass as it will mark the beginning of adequate vital statistics legislation in the Southern states.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

General Subject for the Month: Tuberculosis

Seventh Month—First Weekly Meeting

DIAGNOSIS OF TUBERCULOSIS

PULMONARY TUBERCULOSIS: Early Symptoms and Signs: Family History.—Heredity, predisposition, opportunity for infection; previous diseases. Clinical History.—Malaise, cough, loss of weight, fever, nervous symptoms, respiration, sputum, increased pulse, gastrointestinal symptoms, hemoptysis, night sweats. Physical Examination: Inspection.—Character of respiration, shape and size of thorax, unilateral irregularities, lagging, cardiovascular changes; pupils, gums, larynx, mucous membranes. Palpation.—Vocal fremitus, normal variations in apices, palpable rhonchi and friction sounds. Percussion.—Normal variations in apices, regional differences, normal resonance, intensity, pitch and quality, changes in resonance, intensity, quality and pitch found in early stage. Auscultation.—Normal breath sounds, voice sounds, regional differences, normal disparity between apices; rough breathing, weak breathing, prolonged expiration, puerile breathing, cogwheel breathing; unilateral râles, pleural sounds.

CASES WITH MODERATE INVOLVEMENT: Clinical history, sputum, changes noted on inspection, on palpation, percussion, auscultation.

ADVANCED CASES: Characteristic clinical picture, physical signs on inspection, palpation, percussion and auscultation.

REFERENCE BOOKS FOR THE SEVENTH MONTH

Klebs: American Treatise on Tuberculosis.
Bonney: Pulmonary Tuberculosis and Its Complications.
Pottenger: Pulmonary Tuberculosis.
Wolff-Eisner: Ophthalmic and Cutaneous Diagnosis of Tuberculosis.
Cornet: Miliary Tuberculosis.
Transactions International Congress on Tuberculosis.
Knopf: Essay on Tuberculosis.
Allbutt's System of Medicine.
Nothnagel's Practice; volume on Tuberculosis.

Book Notices

A SYSTEM OF OPERATIVE SURGERY. By Various Authors. Edited by F. F. Burghard, M.S., F.R.C.S., Teacher of Operative Surgery in King's College, London. In Four Volumes. Vols. II and IV. Cloth. Price, per volume, $10. New York: Oxford University Press, 1909.

The second volume of this system deals with operations for tuberculous affections of the bones and joints; with operations on the lips, face and jaws; with operations on the tongue, tonsils, pharynx and esophagus; and with operations on the stomach and intestines.

The chapter contributed by Stiles on operations for tuberculous affections of bones is well done. He deals with the indications for different types of operation and shows the value of the *x*-ray in all these conditions, indicating as it does the extent of the operation to be performed. The value of the chapter by Butlin on the surgical procedures on the tongue, tonsils and pharynx is due to the fact that personal experiences are related by a surgeon who undoubtedly has had more experience than any other with the lesions under discussion.

The chapters on the stomach are good, but the surgery of this organ has been discussed so much of late that little which is new can be added. Moynihan describes methods which are commonly employed by American surgeons, the efficacy of which are no longer doubted. It is interesting that he notes the frequency with which the beginning of the jejunum passes downward and to the right—an anatomic position apparently not noted by the majority of American surgeons. He favors a vertical position of the loop in making the anastomosis. It is pleasing to note that the following statement is made early in the paragraphs devoted to gastro-enterostomy. "Gastro-enterostomy must not be done for the relief of symptoms unless there is a demonstrable organic cause for them in the stomach or duodenum. Symptomatic gastro-enterostomy, if one may use the expression, cannot be too strongly condemned."

The chapters dealing with the operative surgery of the intestines are comprehensive. We are sorry the author has not seen fit to emphasize more strongly the advantages of early operation for appendicitis. He mentions certain signs and symptoms which speak for an operation, but fails to mention that in no other disease are the symptoms and signs so fallacious. The reduction of mortality following the early operation is the best indication of its efficacy.

The value of the imbrication operation in hernia is noted in the chapter devoted to this subject, but Andrews does not receive the credit for the introduction of this principle. The Andrews operation as it is generally employed throughout the middle West is certainly the most satisfactory one yet devised.

The fourth and last volume deals with operations on the female genitalia; with ophthalmic operations and operations on the ear; with operations on the larynx and trachea, nose and accessory sinuses. The chapter contributed by Bland-Sutton on operations on the female genital organs is good. The chapter by Hammar on operations on the larynx and trachea demands careful perusal.

This system of operative surgery supplies to the medical profession a long-felt need, as it combines a detailed account of the indications for surgical interference with a clear description of the method to be employed. The list of contributors is sufficient guarantee of the completeness and character of the system. The subjects are dealt with tersely and while, as in all systems, there are some chapters which do not reach the high standard set by others, it is much more evenly written than is generally the case.

A PRACTICAL TREATISE ON RECTAL DISEASES: THEIR DIAGNOSIS AND TREATMENT. By J. D. Albright, M.D. Cloth. Pp. 455, with illustrations. Price, $4. Philadelphia: J. D. Albright, 1909.

The growing vogue of office or "ambulant" methods of treatment of rectal diseases is largely due to the improvement in technic of local and regional anesthesia, which makes possible the performance of slight operations without confining the patient to bed, or, what appears to be of more importance to-day, without keeping him from business. It would seem that the hitherto well-established belief that rest was beneficial to

patients after surgical operations must give way to the high pressure of modern life.

The author, after lamenting the lack of proper instruction of the medical profession in the matter of diagnosis and treatment of diseases of the rectum, makes roseate claims for the consideration of his specialty by the general practitioner as follows: "There is no specialty in medicine in which the material is so plentiful, the indications for treatment more clearly defined, the results more generally satisfactory, the patients more uniformly grateful and the certainty of proper remuneration more absolute. This, indeed, is the field for the specialist; restricted, yet extensive; exceptionally fertile and copiously fruitful." The commercial idea crops out again on page 170 where business ethics are rated higher than professional ethics. In his description of proctitis, periproctitis, hemorrhoids, pruritis ani and fissure, the author puts forth some startling pathologic views which will certainly need some scientific verification before being generally accepted by the profession. Proctitis and periproctitis as described by him constitute a condition of inflammation which is not confined to the surface of the rectal mucosa but involves the areolar and muscular coats and passes through them into the perirectal tissues. The mucous or seromucous exudate may be superficial enough, he says, to form pouches or sacs which are easily recognized during an examination. Deeper collections of this exudate, after a time, burrow in the direction of the least resistance and form channels in various directions and of considerable length. The irritating character of the exudate in the superficial sacs sets up increased cellular activity, cell proliferation, adventitious tissue formation and increased blood supply until, in due course of time, it becomes a perfectly organized body, known as an internal hemorrhoid. "Mucous exudation, occupying the space between the sphincter muscle and the anal integument, produces edematous thickening of the mucocutaneous folds, between the latter deep, tender and fragile crevices are formed, and, when sufficient dilatation of the anus occurs, it tears at its weakest point" and thus begins fissure. The idea of an acrid mucous exudate passing through the rectal walls and later increasing in quantity by secretion from the perirectal tissues is certainly novel but not proved.

Dr. Albright is an enthusiastic believer in the "orificial principle" and of it reverently speaks as "one who fully realizes that he has but sipped at the fountain which holds in its immeasurable depths the key to an untold and unanticipated wealth of experimental knowledge." The book is florid in style, frequently ungrammatical, but undoubtedly sets forth the author's methods for the ambulant treatment of diseases of the rectum.

MANUAL OF MILITARY HYGIENE for the Military Services of the United States. By Valery Havard, M.D., Colonel, Medical Corps, United States Army. Cloth. Pp. 481, with illustrations. Price, $4. New York: William Wood & Co., 1909.

Colonel Havard has well rounded out a life spent in the service of his country, by giving to the military branch of the medical profession a valuable work on military hygiene, condensed and yet comprehensive. Probably no officer of the Medical Corps of the Army has had better opportunities for the study of this subject, and no one could have employed his opportunities to greater advantage. The best evidence of this fact is the volume itself. The dominant feature of the book is that it is practical and original. Authorities have been carefully studied and analyzed, hypotheses and generalities have been excluded and only facts retained; and these facts are presented concisely, in entertaining form, and in excellent English. Havard properly takes up first the question of mortality and morbidity in the military service, as the prevention of disease and death should be the first duty of the military officer. This subject he discusses fully, making use of statistics of various nations, analyzing and comparing them, and drawing valuable deductions. The sanitary service of armies is now universally conceded to be an essential part of their organization, of vital importance as it decreases the depletion of ranks from disease and increases the fighting strength to its utmost. To accomplish this result the cooperation of officers of the line and the soldiers themselves is most necessary, and he urges instruction in hygiene to this end. Not only in the army, but in the organized militia should this work be carried on. Much space is given to the mosquito and this section is freely illustrated. Infections, parasitic and venereal diseases are briefly but succinctly considered. Next in logical sequence comes the question of the recruit, his selection, physical examination, and then the exercises which he takes, the march, and the various hygienic influences to which he is subjected. The subjects of water purification, food, rations, clothing and equipment, posts, barracks and quarters are thoroughly discussed; the questions of air, ventilation, heating and lighting are considered briefly and yet clearly. Under the heading of the disposal of excreta, garbage, and wastes, the author takes up the various incinerators and crematories which are at present in use and being exploited. He describes under the heading of camps, the various systems of tentage, winter quarters, portable hospitals, pavilions, and the formation of camps and field hospitals and their equipment. Under the conditions imposed on the United States by its recently acquired possessions, service in tropical climates and in the Arctic regions becomes necessary, and these matters are taken up in separate chapter headings by the author who discusses the class of recruits to be sent to hot and cold climates, the modification of dress, uniform, rations, etc., for this service. The closing chapter of the book is on naval and marine hygiene. Taken as a whole Colonel Havard's manual is a most readable book. Although it treats of subjects ordinarily considered uninteresting, he has made it not only valuable but also entertaining. We do not understand why the publishers should have found it necessary to print the entire book on heavy filled paper, thereby greatly increasing its weight, when light paper might as well have been used for the major portion.

PARENTHOOD AND RACE CULTURE: An Outline of Eugenics. By Caleb Williams Saleeby, M.D., Ch.B., F.Z.R., Edin., Fellow of the Royal Society of Edinburgh. Cloth. Pp. 389. Price, $2.50, net. New York: Moffat Yard and Company, 1909.

Dr. Saleeby's book is dedicated to Francis Galton, whose spirit is omnipresent through the whole work. The first part is devoted to an explanation of the theory of eugenics; the second to the practice of the new science. The book is characterized by a spirit of optimism which is possible only to those who can succeed in persuading themselves that the human race needs only to be shown the right way in order to follow it. According to Dr. Saleeby, it would almost be sufficient to diffuse the knowledge of eugenics in order to stop the propagation of the weak, the feeble-minded and the otherwise unfit. To most students of human nature this assumption will seem unwarranted. Scientists have been preaching for years in vain against prejudices and instincts not nearly so deeply rooted as is the instinct of sex attraction and of procreation. One is inclined to believe that the gospel of eugenics so enthusiastically preached by Dr. Saleeby will reach only those of sensitive conscience and high ideals, while the morally unfit will remain callous to its appeal. The book is written in rather a polemic spirit, but there is much of value and interest in it. The controversy over the inheritance of acquired characteristics is fully discussed and the relation of alcoholism in the parent to degeneracy in the offspring is dealt with in the spirit of Fowl. Two chapters are devoted to the refutation of the generally held view as to the decadence of nations, Dr. Saleeby taking here also an optimistic stand.

MEDICAL GYNECOLOGY. By Samuel Wyllis Bandler, M.D., Fellow of the American Association of Obstetricians and Gynecologists. Second Edition. Cloth. Pp. 684, with illustrations. Price, $5. Philadelphia: W. B. Saunders Co., 1909.

This book gives in detail many methods of non-surgical treatment. The hints on bacteriologic diagnosis are simplified and comprehensive. The discription of palpation of the ureters without previous catheterization is rather misleading, and the author's routine treatment of abortion is hardly abreast with the latest views, while the indiscriminate recommendation of invading the uterus by packing and douches is not unattended with danger. In view of the late theories of involution, the generally accepted fact is that it is probably a chemical rather than a degenerative change, but this does not diminish the author's valuable suggestions on the prevention of subinvolution. The subjects of atmocausis, pelvic massage, abdominal supports, and local and general hydro-

therapy, with their indications, are handled with unusual ability. The positive statements in regard to electrotherapeutics, with definite indications, is convincing and demands the attention of those who are prejudiced against this method of therapeutics. The author's position on the latest views of cancer and fibroids of the uterus, and their radical removal on diagnosis compels respect for his views on other subjects.

PRIMER OF SANITATION. A Simple Work on Disease Germs and How to Fight Them. By John W. Ritchie, Professor of Biology, College of William and Mary, Virginia. Cloth. Pp. 196, with illustrations. Price, 50 cents. Yonkers-on-Hudson, New York: World Book Co., 1909.

The author states in the preface that before this book was published it was submitted in proof form to physicians and health officials representing every state in the union. This primer discusses in simple language suited for school children, the problems of hygiene and sanitation, describes the commoner diseases and the micro-organisms causing them, and goes briefly into methods of preventing contagion and infection. One chapter is given to the enumeration of the benefits of vaccination. The spread of contagion by flies is taken up and considerable space is devoted to the subject of disease germs in water and food. The importance of the education of the public in health matters and in the support of health officials in their work for the public health is emphasized. Each chapter concludes with a list of "Points to be Remembered" in which the most important facts are emphasized. The book is to be commended; it seems eminently suited for the use for which it was written.

SURGICAL DIAGNOSIS. By Edward Martin, M. D., Professor of Clinical Surgery in the University of Pennsylvania. Cloth. Pp. 737, with 445 engravings and 18 plates in colors and monochrome. Price, $5.50. Philadelphia: Lea & Febiger, 1909.

This is a carefully prepared and satisfactory text-book of an advanced type and original character. Laboratory diagnosis is considered first, followed by chapters on the application of *x*-rays in surgical diagnosis, inflammation, complications and sequels of trauma and tumors. Then come the systems; skin, blood-vessels, lymph-vessels and glands, muscles, tendons and bursæ, bones and joints and nervous system. Finally the body is taken up regionally, in the conventional order, starting with the head, face and neck, following with the different regions of the trunk, the extremities, and ending with the genitourinary organs and gynecologic diagnosis.

The illustrations form an important feature of the work and are chosen for their instructiveness rather than for artistic embellishment. They are well reproduced, with the exception of a few *x*-ray half-tones whose teaching is lost in their present indistinctness.

HANDBOOK OF DISEASES OF THE RECTUM. By Louis J. Hirschman, M. D., Detroit, Lecturer on Rectal Surgery and Clinical Professor of Proctology, Detroit College of Medicine. Cloth. Pp. 374, with 147 illustrations. Price, $4. St. Louis: C. V. Mosby Medical Book Co., 1909.

Dr. Hirschman has fairly hit the mark in his aim to produce a working hand-book discussing only those conditions of rectal disease which are amenable to treatment in office practice. The whole book is eminently practical, being devoid of fanciful theory or dubious pathology. The chapters on symptoms and the examination of patients are specially worthy of commendation. The author has also given a chapter to the consideration of the limitations of office treatment and the indications for other measures. Dr. John L. Jelks has contributed a valuable essay on dysentery and Dr. George W. Wagner a chapter on the clinical examination of the feces. The work is well illustrated and thoroughly to the point, but is marred by clumsy construction of sentences and inefficient proofreading.

TEXT-BOOK OF MEDICAL AND PHARMACEUTICAL CHEMISTRY. By Elias H. Bartley, M.D., Professor of Chemistry, Toxicology, and Pediatrics in Long Island College Hospital. Pp. 734, with illustrations. Cloth. Price, $3 net. Philadelphia: P. Blakiston's Son & Co., 1909.

This is practically identical with the sixth edition, except that some pages in the chapters on organic and physiologic chemistry have been rewritten—the more complete revision being made in the section on proteids. The nomenclature and the classification of the proteids have been changed to conform to the nomenclature recommended by the American Physiological Society and Society of Biological Chemists.

THE TRAINING OF CHILDREN FROM CRADLE TO SCHOOL. By Mrs. H. C. Cradock. Cloth. Pp. 91. Price, 60 cents. London: George Bell and Sons, 1909.

This book is intended for the guidance and help of young mothers and teachers, and deals with the training of children in a sane and practical way. The qualities necessary in a nurse are discussed, the physical needs of the child are dealt with, and the necessity for plenty of fresh air emphasized. Three chapters are given up to "Moral and Religious Training," and as the author states, there is much in these chapters with which many parents will disagree. All parents, however, might read this book with profit.

Society Proceedings

COMING MEETING

Medical Society of the Missouri Valley, Omaha, March 17-18.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Fourth Annual Meeting, held at Albany, Jan. 25-26, 1910

(Continued from page 558)

Anemia

DR. CHARLES O. BOSWELL, Rochester: In determining which class of anemia is present, all clinical facts that can be gathered together must be considered, and the patient's previous history and the results of physical examination are just as important as the examination of the blood itself. The type of anemia cannot always be positively differentiated from the blood picture alone. Chlorosis is the least common and fatal type; that it is becoming less common in this country is the opinion of many hematologists. In one of my cases the appearance of the disease followed an attack of tonsillitis, the most important point in the history being the gradual and definite onset in a previously well person nearing middle life. Keeping in mind the marked tendency to remission, the period of seeming recovery must not prejudice the diagnosis. I have one patient under observation whose red count has risen in six months from 1,215,000 to 2,750,000 cells; the hemoglobin varied from 50 per cent. to 70 per cent., so that the index at the last count was 1.1, as against 1.9 at first. About three years is the extreme limit of life in the case of pernicious anemia. As opposed to chlorosis, it is known that pernicious anemia has a fairly definite pathology.

DISCUSSION

DR. EGBERT LEFEVRE, New York: There is a type of pernicious anemia that goes through the stages of secondary anemia, where it passes into the pernicious type, with an ideal blood picture. I recall one patient who came into the hospital, after having gone to other hospitals, with a diagnosis of progressive pernicious anemia. There were certain features about this case of the idiopathic type. Search of the stools, at first, failed to give any light, but remembering that sometimes these cases occur from absorption from the intestinal canal, which is developed through the death and decomposition of the *Bothriocephalus latus*, a search was made for the ova of this worm. This failed at the time, but I introduced into the intestinal canal large doses of binoxid of magnesia, five grains, four times a day, and within two weeks the blood picture changed completely, passing to the secondary anemic type, followed by recovery.

Six months later a man, a private patient, who had traveled extensively, came from abroad with a diagnosis of pernicious anemia; he came home to die. He gave an indefinite history of intestinal irritation, but the symptoms suggested a parasitic condition. Having the other case in mind, I put this man on a similar plan of treatment and had the same reaction, so that in a short time he passed from the pernicious to the simple type of anemia, and recovered.

DR. ABRAHAM JACOBI, New York City: For a long time I prescribed arsenic and iron in these cases, but not the binoxid of magnesia. The proportion of cases of pernicious anemia from chlorosis cannot be determined by the hospital physician.

The remarks of the author of the paper as to the infrequency of chlorosis and pernicious anemia are based on hospital experience. General practitioners see these cases in their offices rather frequently, so that chlorosis is by no means so rare as one would conclude from the remarks of the author of the paper. Patients with chlorosis, as a rule, are not admitted to hospitals, and the hospital physician does not see them. Individuals with pernicious anemia, however, must find refuge in hospitals. The number of cases of pernicious anmeia has not been over-estimated when contrasted with chlorosis. There are some cases of chlorosis which will resist all attempts of treatment.

The United States Pharmacopeia: Its Present Status and the Coming Revision

DR. ELI H. LONG, Buffalo: With the last revision the standard character of the book was enhanced in a practical way by including the average dose of each drug and preparation for internal use. The trend of therapeutics along new lines was recognized in the introduction of antidiphtheritic serum and desiccated thyroid and suprarenal glands. These additions indicate that the work of the revisers went just so far in the introduction of new features as the status of our knowledge and experience, tempered by wise conservatism, would permit. In the interest of a simplified materia medica it is important that in the next revision all drugs that are nearly obsolete and those of slight medicinal value should be eliminated. With each past revision, numerous articles have been discarded and others admitted, but too many inferior drugs have been retained. At present, elimination is needed more than addition, though a number of new remedies of approved value should be admitted. In addition to valueless drugs, a number of preparations and unimportant salts can be dispensed with. The list suggested by the committee of the Section on Practice of Medicine of the American Medical Association indicates about what can be properly done in the way of elimination. The practical value of the Pharmacopeia to practitioner and student would further be increased if incompatibles could be mentioned in connection with each substance and preparation. To the same end the chemical tests of substances might possibly be diminished.

Elements of Prognosis in Valvular Diseases of the Heart

DR. R. ABRAHAMS, New York: Young people of from twenty to thirty years of age, in whom arterial changes antedate the development of valvular diseases offer a poor prognosis. Young people of from twenty to thirty with valvular disease, who show subsequently arterial changes, are as bad. Patients of this class are greatly on the increase. Young people with valvular disease, but with no sign of arterial changes, can count on a good prognosis. Middle-aged people, those from 30 to 50, with valvular disease will stand well the hardening process of the arteries so long as the vascular apparatus of the kidneys remains unaffected. The prognosis becomes more and more unfavorable in proportion to the changes in the renal blood vessels. People beyond 60 rarely acquire valvular disease through the medium of infection. Their valvular defects are preceded and caused by atheroma. The prognosis in this class of subjects is rather good. I have seen more middle-aged people die of valvular lesions than old people. I have seen many men and women whose age exceeded by ten or twenty the biblical allotment of three score years and ten living comfortably with all sorts of heart murmurs, which, in young and middle-aged people would mean death in a short time.

Articular rheumatism is justly regarded as the nemesis of valvular disease of the heart in the young as well as in the more advanced in years. Influenza is responsible for valvular disease of the heart. Of the common infectious diseases, typhoid fever and diphtheria are factors to be reckoned with in the cause of valvular disease and because of their known tendency to undermine the heart mostly they constitute no mean element in prognosis. Measles and scarlet fever occasionally produce defects of the valves. Pulmonary tuberculosis with its baneful effects must be regarded as a serious element in the prognosis of valvular disease. Emphysema of the lungs ranks high as an element in the prognosis. Kidney disease, pericarditis, gall-bladder disease and metabolic perversions should be considered in their relation to prognosis. Angina pectoris is a most formidable factor in the prognosis of disease of the valves. I have seen six or seven cases of congenital stenosis of the pulmonary valves. The oldest patient died at the age of 24. One of 20 recently developed tuberculosis and will soon die. The prognosis in this congenital affection is influenced by any extraneous conditions. Correct diagnosis is important as it is the key to the prognosis and treatment.

Dilatation of the Heart

DR. WESLEY T. MULLIGAN, Rochester: The treatment should be preventive. Patients should be taught proper methods of living, and when taken ill, the heart should be examined carefully and often enough to keep one acquainted with its exact condition. The patient should not be allowed to get up from a sickness too rapidly. This cannot be too strongly urged, as no matter how much the physician insists on care, patients will forge ahead too fast for their own good. I find that absolute rest for a period, in young persons, with a little heroin, strychnin and digitalis, one or all, or even none of them, is followed by excellent results. The absolute rest should be kept up according to the condition of the heart. When the heart gets back to its normal size, or nearly so, the patient may begin gradually to get around and exercise. When there is dropsy the old formula of squills, digitalis and calomel is often called into requisition for a time with great benefit, and elastic bandages often give relief to the swollen legs. The abdominal or thoracic cavities sometimes need tapping.

Discussion on Heart Lesions

DR. ALLEN A. JONES, Buffalo: Dr. Abrahams referred to anemia as being an important factor in forecasting the prognosis in valvular disease of the heart, and this is particularly important in patients who are advanced in years. When we find cases of atheroma of the aorta and aortic insufficiency, with possibly a double murmur at the aortic valve, systolic as well as diastolic, with vascular disease and a dilated and hypertrophied left ventricle, or possibly the whole heart associated with a severe grade of anemia, the prognosis is rendered much more serious than is the case with the anemia that so frequently attends valvular disease in younger people. I recall a young woman who came to me seven years ago with mitral disease, with severe chlorotic anemia, with dilated heart, leaking badly at the mitral valve, and the heart action very irregular. The girl was weak and tremulous, but in good flesh, and under rest and iron and appropriate treatment otherwise she improved greatly. In later years she came to me with typical symptoms of hyperthyroidism. She had the tripod—the enlarged thyroid, somewhat prominent eyes, but not markedly so, and tachycardia. At that time her heart had pulled together considerably, although it was large. A mitral murmur was heard. She was anemic again, and that was about two years ago. Recently she returned, having lost all the symptoms of exophthalmic goiter, and presenting herself with a heart in astonishingly good condition. The left border was slightly outside the nipple line. A mitral murmur could be heard only very moderately. The pulse was normal in frequency, and regular, and she was complaining of symptoms entirely remote and different from those she had formerly complained of. Anemia in this case, then, was not a bad prognostic omen. A patient with mitral insufficiency may be carried along for a long time without any serious results apparently. We must consider not only the dilated heart muscle, but the hypertrophy and the ability of that muscle to retain its power of stretching. Under normal conditions the heart muscle is called on to stretch very frequently far beyond the ordinary demand of stretching that is made on it, and as soon as that ability to compensate itself, to increase the intraventricular capacity, is interfered with by myocarditis, or degenerative changes, that heart is never again so good; and this may be the initiation of a condition which finally develops into serious cardiac insufficiency.

(To be continued)

HOOKWORM CONFERENCE

First Southern Health Conference, held in Atlanta, Ga., Jan. 18-19, 1910

(Concluded from page 560)

Difficulties in Diagnosis of Mild Hookworm Infection

DR. C. C. BASS, New Orleans: In well-marked hookworm infection the clinical evidence, blood findings and history of the patient are usually sufficient to direct an observer familiar with the disease, to a correct diagnosis. A simple examination of the feces in such cases settles the diagnosis. When it is appreciated that the number of worms necessary to produce death quickly is usually above 3,000, and when the many circumstances influencing infection are considered, we must recognize that a patient may harbor anywhere from one to several thousand of these parasites; and that in a section of country where a few cases of severe infection exist, there may also be many individuals with only a few worms. A report of Chamberlain on the subject deserves special mention. He found 44 per cent. of 147 soldiers infected. Most of them were Southern-bred men and showed little or no evidence of the disease that could be made out. Recently, 56 students in Tulane Medical College were examined and 21, or 38 per cent., were found infected. In several instances the infected ones appeared as healthy as many of those not infected. It would have been impossible to pick out from appearance the infected men. Careful weighing and measuring showed that the infected averaged 142 pounds; the uninfected 150½ pounds. The infected averaged 5.58 feet in height, the uninfected 5.77 feet. Not only did appearance fail to reveal the presence of anemia in the infected students, but estimation of the hemoglobin of each by five or more men showed an average of 90 per cent. for the infected. All denied having had ground-itch within 7 years and a few of the infected claimed never to have seen it. A differential leucocyte count which usually suggests the possibility of uncinariasis in well-marked cases by an increased eosinophile count fails also to aid in diagnosing the mild cases. Of the 21 cases referred to, a differential leucocyte count of 2,500 cells in each showed only 7 with over 5 per cent. eosinophiles. Of the 35 uninfected individuals 4 had over 5 per cent. eosinophiles. The average of each set was 21 infected 6.3 per cent.; 35 uninfected, 3 per cent.

Examination of the feces for eggs, the finding of which readily makes the diagnosis in all severe cases, fails to locate many of the mild cases if the technic ordinarily followed is practiced. Usually from one to six slides are more or less completely examined, and if no eggs are found the specimen is considered negative. Besides those of which no account was kept, I have record of 496 specimens found negative, 114, or 23 per cent., of which contained eggs that were found on examining centrifuged specimens. In the 21 student cases referred to, 14 per cent. of the cases were missed after several slides of each specimen had been examined by each of 5 different men. After an average of 20 or 25 slides of each were examined, 14 per cent. of the cases were unrecognized until specimens were centrifuged. In another set of 43 specimens from medical students examined by Dr. Gage, who has kindly furnished me these figures, eggs were found in only one specimen with the ordinary technic, but after centrifuging 6 more were found. Of these 43 students, 16 per cent. were infected, and only one case was diagnosed by the ordinary feces examination.

In examining feces for hookworm eggs, the feces are diluted 10 or more times with water centrifuged in an electric centrifuge running at high speed, from 2,500 to 3,500 revolutions a minute, for 6 or 8 seconds. The supernatant fluid is poured off and the sediment shaken with water and centrifuged again just long enough to throw all eggs to the bottom, usually two seconds. This must be determined by trying out the centrifuge on a known specimen. The supernatant fluid is poured off and the process repeated another time or two until the washing gets rid of little or no more débris. The sediment is taken out with a pipette and examined carefully for eggs. Considerable material that cannot be removed with water can be removed with a solution of calcium chlorid having a specific gravity of 1050. If still better results are desired, it is well to give a purgative followed by milk diet for a day or two. The feces will not contain usually anything that cannot be removed with the calcium chlorid solution. It is necessary to examine large amounts of feces, using the centrifuge if only a few eggs are present. The presence of male worms or females too old to lay would not be diagnosed even after the most careful feces examination. The fact that the males are less numerous than females in autopsy-collected lots of worms indicates that they probably do not live longer than the females and absence of eggs would indicate their absence also. Whether uncinaria live and continue to menace the patient long after they cease to lay eggs may have an important clinical bearing on the subject, for if they do an explanation would be offered of the cases in which patients fail to regain normal health and blood after treatment or removal from a source of infection. Recently, I dissected a collection of 247 female *Uncinaria americana* and found that 18, or 7 per cent., of the adult worms contained no eggs. Egg-laying animals higher in the scale lay few or no eggs in the last third of their lives, and it is probable that the same thing applies to some extent at least to these worms. Other observers should study available specimens with this point in view and report their observations.

Hookworm in Alabama

DR. H. G. PERRY, Greensboro, Ala.: In more than 100 cases of uncinariasis of which I have records, there is only one mulatto, and not a single pure-blooded negro. All of these cases occurred among those living on sandy soil. The county in which I live is about equally divided into sandy lands and prairies. The population is 31,000; 6,000 are whites, 90 per cent. living on the sandy soil. Of the 25,000 negroes, 90 per cent. live in the prairies. Not one of my cases has come from the prairies. It is my opinion that from 15 to 20 per cent. of the white rural population of my county (Hale) are affected with the disease. Many obscure chronic diseases can be traced to this cause. Many of those affected feel the effects for life. Many, no doubt, under changed hygienic conditions make partial recovery without treatment. However, many more either die or become mentally and physically defective for life. So long as one is in fair health he may withstand a certain degree of infection. As soon, however, as he becomes debilitated by intercurrent disease the hookworm infection becomes apparent.

In order to draw conclusions I have tabulated 100 cases from my records. Of these cases all were whites: 80 males, 20 females. Ages ranged from 4 to 39 years, with average of 16. The hemoglobin was 10 per cent. in lowest, 90 per cent. in the highest, with an average of 40 per cent. Ground-itch was in 75 histories, and doubtful in 25. (However, I believe all had had it.) Heart murmurs were found in 45 cases; "*bruite de diable*" in 7. Anasarca was present in 15 per cent. Microscopic examination of feces showed eggs of uncinaria in all these cases. Seldom was any other parasite found. After treatment, all symptoms were gradually eliminated. Average increase in weight was 15 per cent. Increase in hemoglobin averaged 40 per cent. Average time of treatment was 3½ months. I always advise continuing treatment till repeated examinations show eggs to be absent from feces, and I have the records of one case in which treatment was continued weekly for a year before a final cure was effected. In another case, treatment has been given at intervals for 5 years, with positive results. In this case there has been entire change in surroundings, and no opportunity of reinfection. In fact, the patient is a trained nurse, and lives in an infirmary. This patient was well advanced in years before treatment was undertaken. It has been my observation that it is much harder to relieve a patient as the age increases. In all patients under 20 years of age, I have noted a marked non-development in height, weight and intellect. In my series no symptoms of pellagra occurred. However, I think it very probable that a person who is weakened by hookworm would be susceptible to pellagra or any other wasting disease.

Young persons respond to treatment much more readily than older individuals, hence the necessity of early diagnosis and treatment; 85 per cent. of my patients were cured, and the others were greatly benefited, and doubtless would have been completely relieved had treatment been persisted in. Improvement can be easily demonstrated by the passage of the worms,

by the certain, gradual rise in the hemoglobin, and by an increase in weight. My treatment is as follows: No supper, a dose of salts at bedtime, no breakfast, from 10 to 40 grains of thymol at 7 a. m., repeated at 9 a. m. Another dose of salts is given at 11 a. m. The feces are strained through thin cloth or sieve to find the worms. This treatment should be repeated two or three times for the first week, unless it weakens patient. In that event, it is repeated once a week. On days when thymol is not being given, some form of iron should be administered. Intercurrent disease or symptoms should have appropriate treatment. No other patients experience more marked relief, as a rule, no others are more grateful.

Preservation of Man

DR. R. M. CUNNINGHAM, Birmingham, Ala., said that the subject of uncinariasis is one of interest to all classes of society and discusses the exciting and predisposing causes of the disease. Inherited predispositions are racial, national, and family. Acquired or accidental causes are environment, climate, altitude, moisture of the air, soil, season, etc., as well as sanitation, hygiene and occupation. Much can be done by society as a whole in modifying the environment of man which predisposes to disease. Much can be done in prevention of disease. Just as the problem of ethics enters when men are related in business or socially, so enters the problem of sanitation in prevention of disease in the community. The most important part is to be played by the medical profession. Physicians are the investigators, the discoverers. No school of scientists, no organization of men is doing more for the human race than is the medical profession.

Biology of the Hookworm

DR. C. W. STILES, Washington, D. C.: It is a general rule in biology that the more closely species of animals are allied the greater the competition, and the greater the amount of trouble. The competition of the individual is extended to the competition of the race. The trouble may be of various kinds. One kind is medico-biologic in its nature. One race will have certain diseases and will transmit them to the other races. In this country we are dealing with four races—the white, black, red and yellow, living in harmony side by side. It is an unnatural condition of affairs. It is a biologic paradox. In 8 of our states we have 833,000 negroes to the whites, and taking the 15 negro states, so to say, 34.34 per cent. of the population is of African origin. The white man has brought to this region certain diseases from Europe, and the black man has brought here certain diseases from Africa. The white man has transmitted his diseases to the negro and the negro has transmitted his diseases to the white.

With reference to soil pollution, during my investigations I have examined something like 20,000 toilet closets, and I want to say that this is a fair representation of the average sanitary conditions to be found on the farms, soil pollution occurring all around, spread by the chickens and the hogs. Over 68 per cent. of the farm houses I have tabulated for North Carolina, South Carolina, Georgia and Alabama, have no toilet of any kind whatsoever. Is it any wonder that we have a high typhoid death-rate, and widespread hookworm disease? Of the negro farms, 79.8 per cent. so far as I have tabulated them, have no toilet, and of the white farm houses, about 46 per cent. have no toilet. These figures may seem astounding. What is the solution of this problem? The institution of the sanitary toilet, with the tub system, and a fluid disinfectant. That will cut the typhoid death-rate of the South in two. It will almost eradicate hookworm disease. It will almost eradicate cochin-china diarrhea, amebic dysentery, and various other intestinal infections.

General Discussion

DR. E. H. MARTIN, Hot Springs, Ark.: What is the exact clinical picture of ground-itch? On the farms there are many cases of different forms of itch among small boys, and it would be interesting to know whether it occurs mostly on the dorsum of the foot, or whether it is an ulceration or a dermatitis.

DR. STILES: So far as I have seen, ground-itch at present covers a multitude of sins. I do not believe that what we call ground-itch in the South to-day is a single entity. So far as I am aware, no dermatologist has studied the condition thoroughly as yet, and I would rather have a dermatologist study it and analyze it for me, as I am not competent to analyze ground-itch myself.

DR. F. W. SCHNAUSS, Cecil, Ga.: Pellagra has been mentioned in connection with hookworm disease. I have had four cases of pellagra, but I do not think that disease has anything to do with uncinariasis.

DR. STILES: There is as yet no positive evidence as to the possibility for self-reinfection. Some experiments on that line are being contemplated at present. I would not say it is impossible.

DR. B. B. BAGBY, West Point, Va.: I believe that we have as many cases of hookworm disease in Virginia as there are in Georgia. In examining the stools of patients in my district, I do not hesitate to say that fully 80 per cent. of the people who work in the cotton mills in Virginia are infected with hookworm. The class of people we have to treat are peculiar, in that they do not realize they have hookworm. Even when they find out they have it, they do not want to be treated; and some of the more aristocratic people, when told that they have hookworm disease feel insulted. In almost every case of old-fashioned foot-itch I have found hookworms in the intestines.

DR. JERE L. CROOK, Jackson, Tenn.: Many practitioners have not the facilities for making microscopic examinations of the feces to see whether patients are suffering from hookworm disease or not. In many of our towns we have not either a skilled pathologist or a microscopist, and if we wait for the medical profession to equip themselves with microscopes we will delay carrying out the objects for which this conference is called. I would like to ask Dr. Stiles whether it is justifiable in the present light of our knowledge to make an experimental diagnosis and administer thymol on a tentative diagnosis, or whether we must have the microscopic findings before doing so.

DR. STILES: Any physician in the South can forward fecal material to the State Board of Health, or to me at Washington, and it will be examined free of charge, and the physician informed of the results of the examination by return mail. If, for any reason, a microscopic examination is not feasible or not practicable, I, personally, would not hesitate to give experimentally, thymol treatment unless it was contraindicated by the patient's condition. Of course, I would not give it in a case of pregnancy, or in a patient with severe cardiac symptoms. But physicians must not forget that they can have the diagnosis made for them.

DR. CLAUDE A. SMITH, Atlanta, Ga.: When it was my fortune in 1901 to discover the first case of hookworm disease which we had in Georgia, I did not realize the extent of the malady. I immediately began an investigation and through the assistance of Dr. Green I examined twenty convicts, who worked in clay, and we found two additional cases. In the first case, occurring in a mulatto, an autopsy was held. In the two additional cases the infection was mild. I began to investigate the mode of infection, and became convinced that it was through the skin. This was confirmed clinically by many cases. From one man I recovered 1,300 parasites. I demonstrated repeatedly that the disease was contracted by the parasite passing through the skin. Since then my investigations have convinced me more thoroughly than ever that it is the principal mode of infection. In regard to separating the eggs, I found in early investigations that this could be done by centrifugalizing the specimens. While the work of Dr. Bass is very thorough and to be commended, for practical purposes I find that centrifugalization of the specimen is all that is necessary in mild cases.

DR. A. G. FORT, Lumpkin, Ga.: In treatment of hookworm, thymol is the standby; but betanaphthol takes the place of thymol splendidly, and can be given in powder form, while patients do not object to it as they sometimes do to thymol. There is a preparation mentioned in Manson's "Tropical Medicine" containing chloroform, oil of eucalyptus, and castor oil, which I have used a number of times with satisfaction in children, and in those with heart lesions. I find that patients with hookworm disease progress just as favorably without tonics as with them.

DR. EDWARD E. LINDEMAN, Tampa, Fla.: Recently there were sent to the State Board of Health of Florida several specimens of what appeared to be calculi accompanying the pathologic condition of uncinaria; but on microscopic examination of the crystals and chemical analysis they proved to be solid masses of thymol. It is evident that thymol will pass through the intestinal tract at times in a solid mass, and therefore, thymol in a solid mass has no therapeutic value. The manner in which thymol acts prompted me to look into the matter a little to see in what form thymol may be administered to the best advantage. It seems that the drug acts on the parasite by the crystals in a fine condition coming in contact with it. Thymol in solution has little or no therapeutic value, although thymol in a finely suspended state has. It is desirable, therefore, that the thymol be given in a finely powdered state, so that it will become widely disseminated and the crystals come in contact with the worms.

Formation of Permanent Organization

A permanent organization was formed and is to be known as "Southern Health Conference."

The following officers were elected: President, Dr. H. F. Harris, Atlanta, Ga.; secretary, Mr. W. G. Cooper, Atlanta, Ga.; vice-presidents—Alabama, Dr. H. G. Perry, Greensboro; Florida, Dr. Hiram Byrd, Jacksonville; Georgia, Mr. Wilmer L. Moore, Atlanta; Kentucky, Dr. J. B. Marvin, Louisville; Tennessee, Dr. J. A. Albright, Nashville; Virginia, Dr. E. G. Williams, Richmond; North Carolina, Dr. R. H. Lewis, Raleigh; Mississippi, Dr. S. H. McLean, Jackson; Arkansas, Dr. E. H. Martin, Hot Springs; South Carolina, Dr. Wm. Weston, Columbia; Texas, Dr. W. M. Brumby, Austin; Louisiana, Dr. George Dock, New Orleans; District of Columbia, Dr. W. C. Woodward, Washington; Oklahoma, Dr. J. L. Shuler, Durant; United States Army, Major B. D. Taylor, Atlanta; United States Navy, Passed Assistant Surgeon J. H. White, Washington; Hawaii, Dr. W. D. Baldwin, Honolulu.

Vital Statistics

The following resolution was adopted:

WHEREAS, It is exceedingly difficult to get accurate information concerning health conditions in the South, except in a few localities; therefore, be it

Resolved: That the executive committee, the president and vice-president and the board of councillors for each state are requested to bring to the attention of all state and municipal legislatures the urgent need for providing some efficient measure for the uniform collection of vital statistics, such as the bill that has been approved by the American Medical Association, and the United States Government.

National Bureau of Health

The following resolutions were adopted:

Resolved: That this conference memorialize Congress and the President of the United States on the subject of a National Bureau of Public Health, and that a special committee be appointed to present this matter at Washington. Be it further

Resolved: That members of the conference in their respective communities, and the vice-president and the board of councillors in each state are requested to use their influence with the members of Congress for the establishment of such a department.

Vote of Thanks to Mr. Rockefeller

DR. W. F. WESTMORELAND, Atlanta, offered the following resolution, which was adopted:

Resolved: That the Southern Health Conference by a rising vote extends to Mr. Rockefeller its sincere thanks and high appreciation of his munificent and humanitarian gift to our people to aid them in the arrest and cure of hookworm disease.

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, held Dec. 8, 1909

The President, DR. FREDERICK P. HENRY, in the Chair

Lithium Waters as Therapeutic Agents

DR. HENRY LEFFMANN: Lithium salts have been therapeutic fetishes for nearly half a century. The emotional enters so largely into the impulses of most persons that it is not improbable that the adaptation of lithia for the treatment of lithiasis was given greater plausibility to many on account of the similarity in terms. The doctrine of "signatures" contains many quite as strange inferences. I am old enough to recall the earlier years of the effect of Garrod's book. At that time uric acid was a pathologic Frankenstein monster, and the promise of anything that would keep it and its salts in solution was, of course, hailed with delight. As soon as Garrod's views took hold of the profession the methods of administering the lithium salts were canvassed with much vigor. The exploitation of "lithia waters" became a feature of commercial therapeutics. The term is not scientifically accurate. Lithia is, strictly, lithium monoxid, which cannot be present in a natural water, but the expression is well-established and does not seriously mislead. Waters containing but minute amounts of lithium have become established in commerce as "lithia waters." On the result of an analysis of about two score of the so-called mineral waters the Bureau of Chemistry of the Department of Agriculture has recently issued a circular of inquiry the essential features of which I give herewith. It has been found that nearly all "lithia waters" either contain only spectroscopic traces of lithium (unweighable quantities in 2 to 4 liters), or contain less than one part per million (approximately 0.05 grain per gallon) of lithium. All the analyses of the U. S. chemists give the lithium in the form of chlorid which is not likely to have solvent action. If it acts as a diuretic—which is not impossible, it will be largely as an irritant to the secreting tract and the same result could probably be accomplished by increasing slightly the ingestion of common salt. It must not be overlooked, however, that the methods of water analysis rarely enable the chemist to state positively the association of the different ingredients—the so-called ions—and in a report giving such ingredients as lithium chlorid, sodium sulphate and magnesium carbonate as existing in a sample, the data of the laboratory-book will correspond just as well to the arrangement, lithium carbonate, sodium chlorid and magnesium sulphate, or any of the other permutations that can be made of the negative and positive ions respectively. It is true that other tests of the sample, *e. g.*, taste, and behavior on boiling, may suggest special combinations, but in complex waters, as are most of those here considered, the arrangement will be inferential, and the government chemists have, therefore, given the statements as hypothetical form of combination. If their arrangement is accepted, no lithia water, in the sense in which Garrod and his followers have used the term, is offered for sale in this country.

Another important point is that almost all waters rich in lithium salts are so rich in other mineral ingredients that they are not suitable for a regimen. Any attempt to use a water containing an infinitesimal amount of lithium would be on the same basis as the administration of cod-liver oil for the minute amount of iodin in it. Another and even more serious objection is that some waters contain notable amounts of barium salts. Barium compounds are distinctly poisonous. Recent analyses by the Bureau of Chemistry in a special investigation have shown that barium compounds contained in plants have been the cause of serious poisoning of stock on some of the western feeding grounds.

The conclusion of the matter seems to be that it is doubtful if even lithium carbonate is of any real value in the treatment of uric acid lithiasis, and if so, it cannot be introduced by the use of the commercial lithia waters. The only way in which to get the proper dosage is to use the pure salt in tablet form or (probably the best method in practice) to prescribe the liberal use of a distilled water containing definite amounts of pure lithium carbonate. Excellent distilled waters can now be obtained at moderate cost and druggists can easily dissolve a small amount, say five grains, of the pure lithium carbonate in a gallon and the water can be used as desired in place of ordinary drinking water.

The time is now at hand to overthrow the "lithia water" fetish, the only use of which is to extract annually many thousands of dollars from the pockets of real and imaginary sufferers in this country.

Therapy by Bacterins and Tuberculins in Mixed Suppurative Bone and Joint Disease

DR. B. A. THOMAS read this paper. Similar articles by the same author appeared in THE JOURNAL, Jan. 22 and 29, 1910, pages 258 and 362.

Malignant Disease of the Sacrum Simulating Sciatica

DR. ALFRED GORDON read this paper, which will appear in full in THE JOURNAL.

WESTERN SURGICAL AND GYNECOLOGICAL ASSOCIATION

Nineteenth Annual Meeting, held at Omaha, Dec. 20-21, 1909

(Concluded from page 561)

Scopolamin-Morphin Preliminary to General Anesthesia; A Report Based on 1,100 Cases

DR. CLIFFORD U. COLLINS, Peoria, Ill., read this paper, which will appear in full in THE JOURNAL.

Progress in Surgery of Renal Calculi

DR. DANIEL N. EISENDRATH, Chicago: Much of the progress in surgery of the kidney in recent years is due to the improvement in operative technic, as well as to the ability to secure better skiagraphs of the kidney and ureter. Few surgeons are willing to operate for suspected renal calculus, unless the skiagraph shows a shadow indicative of such a calculus. Every picture should include both ureters and both kidneys, since one is likely to overlook the presence of calculi in both kidneys, unless both sides are taken. A long twelfth rib may hide a calculus lying behind it. Calculi lying at the pelvic orifice of the ureter have a peculiar nipple-like downward and inward projection, which is very characteristic. Stones in the parenchyma of the kidney usually give round and small shadows. The stones which lie in hydronephrotic cavities, or in the dilated calices, are large and oval. Some calculi have a coral-like structure, indicating marked dilation of the calices. A shadow scattered over a considerable area usually means destruction of the kidney. If the shadows are at a level below that of the normal kidney, one can exclude ureteral calculi. The best way to prepare a patient for a radiograph is to resort to thorough catharsis and liquid diet eighteen hours before taking the picture. The shadows which are to be excluded are those due to tumors or dilated calices, scybala, calcified glands or centers of ossification in the costal cartilages and tuberculous foci in the kidney. From many cases of my own and of others I find that bilateral calculi occur in 30 per cent. of the cases. Anuria is a frequent complication of bilateral calculi.

I recently made investigations in regard to the presence of accessory renal arteries. It is necessary to know the presence of such multiple arteries in connection with all operations on the kidney, especially nephrotomy and nephrectomy, since severe and perhaps fatal postoperative hemorrhage may occur through such an oversight. Attention is also directed to the variation in the types of renal pelvis. One is accustomed to think of only one type of pelvis in which the pyramids of the kidney open into a large sac. This ampullar type only occurred in about 30 per cent. of cases. In the remaining 70 per cent. the pelvis divided either outside of or soon after entering the kidney into two or three large primary calices, from each of which a number of secondary calices arose. In regard to the best method of removal of calculi from the kidney, if the radiograph shows a single stone at the outlet of the pelvis, and the surgeon is certain that this is the only calculus present, the best method of removal is through an incision into the posterior surface of the pelvis where there are very few vessels, and the extraction of the calculus under these circumstances can be readily done. If, however, there are a number of shadows scattered over the kidney area or one large calculus, it is best to remove it through a nephrotomy incision.

DISCUSSION

DR. M. L. HARRIS, Chicago: The need of knowing the condition of both kidneys is important. The frequency of bilateral kidney stones is little recognized by most physicians and only by very few surgeons, unfortunately because the frequency with which some accident happens to the patient after the removal of the first kidney is very great. It is impossible to determine the existence of bilateral kidney stone by the symptoms, as frequently the symptoms are limited to one side for at least a long time, and by depending entirely on the symptoms one is led to operate on that side and neglect to examine the opposite side. This was forcibly illustrated to me recently. A patient came to me with a history of renal stone, with repeated attacks of renal colic in the left side, and I sent him to the hospital for the purpose of examining the two kidneys by catheterization. We set an appointment two days ahead. On the morning on which I was expected to make the examination he got to the hospital before I did and was seized with an attack of acute renal colic on the right side. Up to that time he had no symptoms whatever of involvement of the right kidney, yet on the eve practically of doing something for left-sided trouble he suddenly manifested evidence of involvement of the opposite kidney. After he had passed over the colic I catheterized both sides and found both kidneys involved. This case shows that we should invariably examine both kidneys, not only by *x*-ray but by separating the urine from each kidney in every patient with kidney trouble on whom we expect to operate.

DR. LEONARD FREEMAN, Denver: I should like to speak of one embarrassing complication in operating on kidneys for stone, and that is secondary hemorrhage. It is an extremely unfortunate thing to have operated on a kidney and successfully removed a stone and have the patient go on in the best of condition for a week or ten days and then begin to have a little blood in the urine, a little more the next day, and still more the next day. Such hemorrhages are not infrequently fatal. The only thing to be done under these circumstances is to remove the kidney, and the sooner that is done in the presence of secondary hemorrhages the better it is for the patient. That, again, illustrates Dr. Harris' statement that it is absolutely necessary to know, before we extract a stone from one kidney, whether the patient has another kidney or not, and whether that kidney is doing its duty, because in the face of a severe secondary hemorrhage of this kind it is impossible sometimes to find out the condition of the second kidney. I have had this happen to me twice. Once on the seventh day a hemorrhage began as a slight hemorrhage and the following day a severe one which almost killed the patient; and in the second case the hemorrhage began on the ninth or tenth day, and a very severe hemorrhage did not manifest itself until the twelfth or thirteenth day. In each case I did nephrectomy under desperate circumstances, using salt solution and adrenalin in the vein to resuscitate the patient, and had the satisfaction of seeing these two patients recover. But it was a very close call in each case.

DR. ARTHUR C. STOKES, Omaha: I had a patient with stone in the kidney in whom there were almost no symptoms. Preceding the operation for removal of the kidney the patient was operated on, a diagnosis having been made of floating kidney. An incision was made going straight through the muscles of the back, and in the attempt to tie the kidney up to the back a lot of pus was found. The surgeon was not prepared to remove the kidney. The patient subsequently came under my care and the kidney was removed. This patient had practically no symptoms, yet the kidney was almost entirely destroyed. The parenchyma was almost entirely gone, leaving only fibrous tissue here and there. On the removal of the kidney about a quart of pus came out of its pelvis and around the kidney. The kidney pelvis was practically destroyed. I wish to emphasize the great care that should be taken in the diagnosis of renal stone. There is no symptom or set of symptoms pathognomonic of kidney stone. It has happened to me several times to have made an absolute diagnosis of stone in the kidney, and yet on opening in there no stone was found. That is embarrassing. Now that we have the use of the *x*-ray in kidney stone work we are able to differentiate a stone in the kidney from pyonephrosis, pyelonephrosis, and so forth.

DR. CHARLES H. MAYO, Rochester, Minn.: There is no major operation which is undertaken with less working out of details than operative procedures on the kidney. Many times we will

see very good surgeons undertake an operation on the kidney just because there is a tumor, when it would only take a little more time to determine the functional capacity of both kidneys and see if any emergency exists. When one becomes advanced in kidney work he feels that he must determine the functional capacity of each kidney, and feeling, above all things, that in some instances he must preserve the kidney after removing the stone. Anomalous blood vessels are encountered in kidney work. These are not uncommon, although it is only lately that we have realized that they are present.

DR. A. W. ABBOTT, Minneapolis: Dr. McArthur of Chicago has reported a case in which the blood supply was from the external iliac; while in a case of my own the supply was from the internal iliac.

Preparation of Patients for Prostatectomy

DR. E. S. JUDD, Rochester, Minn.: The general tendency regarding the preparation of patients for surgical interference is to reduce the details to a minimum, although there are some patients who will do better if they are especially prepared. In reviewing the autopsy findings in cases from the clinic in St. Mary's Hospital which had terminated fatally following operation for the removal of the prostate, it was found that the cause of death in practically every instance was kidney insufficiency and acute nephritis superimposing on an old kidney lesion, usually chronic nephritis. Because of systemic conditions some of these patients are not good subjects for operation; on the other hand, the poorest subject will sometimes endure a difficult prostatectomy with considerable loss of blood and be in good condition in a few days. As the gland increases in size the amount of residual urine increases until the back pressure, coming gradually, becomes a constant factor in the function of the kidney. Continued withdrawal of the pressure will throw the kidneys into a condition of acute congestion, and if they are partially disabled the sudden change may prove very serious, resulting in acute nephritis and suppression. To overcome this difficulty at St. Mary's Hospital we commence by emptying the bladder with a catheter at stated intervals, gradually shortening the intervals until the bladder is emptied every hour. In our experience it has not been satisfactory to leave catheter in the bladder. No particular advantage is to be derived from special diets, therefore, regular diet is maintained up to the morning of the operation. One ounce of castor oil given 48 hours before operation is most satisfactory. Salt solution by rectum soon after operation aids elimination from the kidneys. Looseness of the bowels is most undesirable. The arteries of these patients are hard and inelastic and it is difficult to fill up the circulation; the patients are, therefore, encouraged to take great quantities of fluids for several days before operation. Urotropin (hexamethylenamin) given in doses of from 7 to 10 grains several times each day for a few days before operation will help the condition and tend to better the quality of the urine. The cystoscope is a valuable aid in the determination of the amount and kind of preparatory treatment. An operation should not be attempted during an acute cystitis or epididymitis. It is not advisable to remove the gland in the stage of acute retention.

Lymphangioma with Report of a Case of Macroglossia and a Case of Macrocheilia

DR. A. A. KERR, Salt Lake City, Utah: When practical, the proper treatment of lymphangioma is excision. In macroglossia, if the swelling interferes with mastication, speech, or deglutition, the proper treatment is partial excision. In macrocheilia, partial or complete extirpation is indicated for cosmetic purposes, as well as a prophylactic measure against infection or malignant degeneration. In the case reported, by means of a wedge-shaped excision parallel with the long axis of the lip, the latter was reduced to normal size.

Further Experimental Data on Vasomotor Relations of Shock

DR. M. G. SEELIG, St. Louis, referred to a previous paper, gave details of experiments, and stated that it would seem to be fair to assume that the pressor effects of vasomotor stimulation are due largely to vasomotor constriction, and that cardiac augmentation, at least in the later stage of shock, is not a primary factor in the rise. In conclusion he stated that it need hardly be emphasized that the results of the research point in every instance against the correctness of the theory that shock is a symptom-complex due to vasomotor exhaustion.

Osteomyelitis

DR. JAMES E. MOORE, Minneapolis: Bone diseases are very common, but the literature is comparatively scant. Until a comparatively recent date most inflammations of bone were diagnosticated as periostitis, but with the exception of cases in which the periosteum is directly injured and infected, or when the infection extends from the overlying soft parts, periostitis is a rare disease. Many lives and limbs have been sacrificed because the surgeon was content with a diagnosis of periostitis and an incision through the periosteum when the original seat of the disease was in the medulla. Inflammation of bone is due to infection just as it is in any other tissue, the added symptoms and dangers being entirely due to the density of the structure. Contusion of bone is the most common exciting cause of osteomyelitis, but underlying causes are back of that, because all contusions of bone are not followed by infection, and many so-called idiopathic cases occur with no history of contusion whatever. In very young children diagnosis is not easy because of the absence of subjective symptoms, and because infection not infrequently occurs in the epiphysis instead of in the usual seat near the end of the diaphysis. Early invasion of the joint in cases of epiphysitis is also liable to be misleading. Exceptionally acute tuberculosis of the epiphysis bears a strong resemblance to septic epiphysitis, but the pain is seldom so severe, the temperature rarely goes above 102 F., and leucocytosis is low or absent.

In some cases, the differential diagnosis between osteomyelitis and typhoid fever is not easy, for the patient suffering from osteomyelitis is in the so-called typhoid condition. Early treatment of acute osteomyelitis is as much of a surgical emergency as treatment of acute appendicitis. The diagnosis should be made early and followed promptly by operation. There is no medical treatment and poultices and other local applications only lead to waste of valuable time. An incision through the periosteum may relieve pain, but is insufficient because it fails to stop the ravages of the disease. By a prompt opening into the center of the bone drainage is established and pressure relieved, and when made early enough will stop the separation of the periosteum and destruction of the endosteum, thus preventing or limiting necrosis. In very early operation no pus may be found, but the medulla is greatly congested and protrudes into the wound. Under these conditions the trephine opening need not be enlarged. When acute osteomyelitis begins in the epiphysis, as it sometimes does, especially in young children, the infection is liable to be from the streptococcus, and in addition to the danger to life is the danger to the neighboring joint. An opening should be made into the center of the epiphysis before the joint becomes involved, being careful always to preserve the epiphyseal line. Chronic osteomyelitis may be the result of an acute attack or may be subacute from the first, when it is liable to be mistaken for tuberculosis. In cases following an acute attack an operation should be performed for the removal of the sequestrum as soon as it is separated, which is anywhere from six weeks to four months. The cavity should be thoroughly curetted, washed, and disinfected by heat or 95 per cent. phenol, the latter being much more convenient, and in my experience eminently satisfactory. The acid should be left in the cavity for 3 to 5 minutes, when it should be wiped out and the cavity thoroughly washed with alcohol, after which it should be dried and filled with Moorhof's bone wax in a liquid state. The wax quickly hardens at the temperature of the body, after which the periosteum and soft parts are closed in layers by means of chromicized catgut. A dry surgical dressing should then be applied, the bandage being quite snug, and finally the tourniquet should be removed. In most of my patients the wound has healed promptly, and the results have been satisfactory. My experience with the bone wax is such that I can consciously recommend it, for when I have temporarily failed I am confident that the fault was in my technic and not in the method.

Medicolegal

Liability for Communication of Gonorrhea by Instruments Used

The Supreme Court of Washington says that the case of Helland vs. Bridenstine (104 Pac. R. 626) was brought against a physician to recover for alleged malpractice consisting of the use in and on the plaintiff's genital organs of unclean and unsterilized instruments, whereby the loathsome disease of gonorrhea was communicated to her.

The evidence on the part of the plaintiff tended to show that she had been suffering for a number of years with some nervous affliction. That after the defendant had prescribed for her, and she had experienced only temporary relief, he stated that her symptoms indicated some derangement of the genital organs, and that if she would call at his office he would examine her. That she called as requested about February 1, when the defendant proceeded to examine her, using a speculum and probe, which he took from a nearby drawer and which were wrapped in a towel, and which were used as they were taken from the towel. That between 5 and 10 days thereafter she began to be troubled with inflammation and pain in the parts affected, accompanied by a discharge, which gradually became more severe, causing her to take to her bed. That the defendant was called in and treated her until August 15, when he quit treating her, and another physician was called in who pronounced her disease to be gonorrhea and treated her for some three months thereafter, finally pronouncing her substantially cured. The plaintiff also testified that her husband had died on January 11 of that year, and that she had not had sexual intercourse with him for some weeks preceding his death. She was not asked, and did not testify directly, that she had not had sexual intercourse with any other man, but did state that her husband had no venereal diseases, and that there was no other way than from the defendant's instruments by which she could have obtained the disease. The physician who treated her last also testified that when she called on him in August for treatment she was suffering from chronic gonorrhea, which he ascertained not only from diagnostic symptoms but by finding in the discharge from her genital organs the specific microbe of the disease. He testified also as an expert that she could acquire the disease from an infected speculum used on her in the manner she testified this one was used.

The defendant testified that in making the examination in question he used a speculum, a probe, and a forceps; that these instruments were kept on top of a medicine case in his office; that they were never kept in a drawer, and that after using them he always washed them in a mercuric iodin solution and soap and hot water, and immediately before using them he sterilized them by boiling them in hot water in a receptacle on a gas stove in the back part of his office, and that it was in this manner that these instruments had been cleansed and sterilized before use on the plaintiff; that the last time he had used the instruments prior to January 25, the date he used them on the plaintiff, was on January 19, on a woman suffering from chronic uterine trouble, not gonorrhea, and not infectious, and that he had not treated a case of gonorrhea in a female for many months prior to the time he treated the plaintiff. He further testified that his office was heated by a steam heater operated only in the daytime; that at night the office would become cold, running down to a temperature of from 50 to 55 degrees Fahrenheit. He also called a number of expert witnesses, who testified in substance that gonococci, the specific microbe of gonorrhea, could not survive in a temperature as low as 50 or 55 degrees Fahrenheit for any length of time, certainly not as long as four days, especially on a nickel-plated instrument such as a speculum; and each of them testified that under the circumstances testified to by the defendant it was impossible that the plaintiff could have obtained gonorrhea from his treatment.

In rebuttal two witnesses testified that the defendant had made an examination on them similar to the one made on the plaintiff, the one in the following April, and the other in June, and that in neither case did he sterilize the instruments before using them; that he took them from a drawer where they were kept wrapped in a towel, and used them without cleansing or sterilizing them in any manner.

The court thinks that there was here sufficient evidence on the question of the defendant's negligence, the question whether the plaintiff had actually become infected with gonorrhea, and the question whether the disease was communicated to her by means of the instruments the defendant had used on her person, to require their submission to the jury. The plaintiff was not required to prove her case beyond a reasonable doubt, nor by direct and positive evidence. It was only necessary that she show a chain of circumstances from which the ultimate fact required to be established was reasonably and naturally inferable. If it was true (and whether or not it was true was for the jury) that the plaintiff went to the defendant's office free from gonorrhea; that the defendant introduced into her vagina a speculum, which he used on other patients, without cleansing or sterilizing it, and that within the time thereafter usual for such a disease to generate she became afflicted with the disease, and there was no other known source of infection, it was a reasonable inference that she caught the disease from the instrument used on her by the defendant, and that the disease was negligently communicated to her. Nor was the inference so far overcome by the evidence of the expert witnesses as to require the court to take the question from the jury. None of them purported to testify how long the microbe gonococcus would live on a speculum which was wrapped in a towel and placed in a drawer in the temperature of the defendant's office. Moreover, the opinion of experts are taken to aid the jury in arriving at the ultimate fact, and no matter how positive may be their conclusions drawn from a given state of facts, it is still a question for the jury whether or not the facts recited on which the conclusion is based are the facts proven by the evidence, and whether or not the conclusion is correctly drawn.

The court, however, considers that a verdict for $4,000 in the plaintiff's favor was excessive, and gives her a choice beween accepting $2,000 and a new trial. She had fully recovered from the disease, and no permanent disability or injury resulted therefrom. Her losses because of inability to perform her ordinary duties while afflicted were but little more than nominal, and her expenditures for medicines and medical fees did not exceed at the utmost $200. For her pain and suffering, both physical and mental, she was of course entitled to full compensation, but this was the extent of her rights. Nothing should be awarded her as smart money, or for the purpose of punishing the defendant.

Illegal Practice of Medicine for Ten Years Does Not Entitle to License

The Supreme Court of Colorado says that the plaintiff in the case of Higgins vs. State Board of Medical Examiners (104 Pac. R. 953), not a graduate in medicine, having applied to the board for a license to practice medicine and surgery without examination, and the board having denied his application, brought this action to compel the board, by mandamus, to issue the license. He claimed that, as he had made the practice of medicine and surgery his profession continuously for a period of more than 10 years prior to Feb. 2, 1905, the date of his application, he was entitled to a license under section 4 of the law of 1881, the concluding sentence of which reads: "All persons who have made the practice of medicine and surgery their profession or business continuously, for the period of ten (10) years, within this state, and can furnish satisfactory evidence thereof to the State Board of Medical Examiners, shall receive from said board a license to continue practice in the state of Colorado."

The plaintiff insisted that the practicing of medicine and surgery for any continuous period of 10 years, whether before or after the passage of the statute mentioned, although in defiance of law, entitled him to a license. The board, on the other hand, contended that no person is entitled to a license from it unless: (1) He proves that he is a graduate of a legally chartered medical school of good standing. (2) He passes a satisfactory examination. (3) He proves that he has made the practice of medicine and surgery his profession or business continuously for the period of 10 years prior to the passage of the act.

Section 12 of the act provides that the person who practices medicine in the state of Colorado without a license from the Board of Medical Examiners shall, on conviction, be punished by fine or imprisonment, or both; and to adopt the plaintiff's construction would be to reward, not punish, those who elude prosecution for the period of 10 years. The law should not be so construed, and the court holds that the contention of the board is correct, and that those only who have practiced for 10 years prior to the passage of the law of 1881 are exempted from the provisions of the statute requiring examination and proof of graduation. In the case of State vs. Wilson, reported in 61 Kan., at page 791, that court said: "Can it be that the Legislature intended that a person might qualify himself for the practice by that which the act prohibited? Is the direct and persistent violation of the law to be deemed the equivalent of character, education, experience, and skill which the statute requires for the protection of life and health?" These identical questions are presented to this court, and it does not hesitate to answer them in the negative.

A judgment of nonsuit is affirmed.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

February 5

1 Present Status of the Tuberculosis Campaign and the Essentials for Thorough and Prompt Success. L. F. Flick, Philadelphia.
2 *Study of Vasomotor and Trophic Disturbances in Hysteria. A. Gordon, Philadelphia.
3 *Malignant Leiomyoma. M. Ballin and J. W. Vaughan, Detroit.
4 Polycystic Kidneys. R. C. Newton, Montclair, N. J.
5 The Ounce of Prevention. S. W. Newmayer, Philadelphia.
6 *Enuresis. F. L. Wachenheim, New York.
7 Unusual Otitic Sinus Thrombosis; Operation; Recovery. H. B. Blackwell, New York.
8 Diagnosis and Treatment of Stricture in the Male Urethra. T. L. Deavor, Syracuse, N. Y.
9 *Case Illustrating the Arrest of Early Paresis. T. A. Williams, Washington, D. C.

2. **Hysteria.**—Gordon reports one case in proof of his contention made in 1907 showing the possibility of occurrence of vasomotor and trophic disturbance in hysteria and caused by hysteria.

3. **Malignant Leiomyoma.**—Ballin and Vaughan add one case to the thirteen already recorded showing that nonstriated muscle cells may assume malignant rôles. In this particular case, the muscle cells were so little altered in the metastatic locations that it rendered their derivation absolutely certain. The patient, unmarried, aged 28, was referred for operation because of a uterine tumor which had been discovered by her physician eleven months before. She complained of profuse and painful menstruation, which occurred every two and a half weeks, together with pressure pains in the lower extremities. The latter had been present for six months. Examination revealed a mass the size of a child's head in the lower abdomen. The mass moved with the cervix and could not be distinguished from the uterus. Its contour was rough and uneven, so that a diagnosis of multiple fibroids was made. Operation was advised and accepted.

A median celiotomy was performed. The uterus was hard, firm, irregular, and the size of a child's head. The omentum was studded with enlarged lymph glands. The irregularity in shape of the uterus was caused by the presence of many hard white nodules which varied in size from that of a pea to that of a tangerine orange. Enlarged lymph glands were also found along the iliac artery and the tip of the appendix, as well as one at the base of its mesentery. The probable diagnosis of sarcoma was made, and because of the impossibility of removing all the involved glands, the less radical operation of supravaginal hysterectomy was deemed best. Both tubes and ovaries, the retroperitoneal glands and the appendix with its accompanying glands were removed, as was also a piece of the omentum (5x5 inches), which contained the greatest number of enlarged glands. Microscopic examination disclosed a leiomyoma. Seven months after the operation, the patient was still in fairly good health, although all the malignant tissue was not removed at the operation.

6. **Enuresis.**—That enuresis must be classed as a "habit" is the point made by Wachenstein. He says that the more we analyze it, the more does the entire clinical picture give the impression of being essentially a developed habit, and a concomitant stuttering or *tic convulsif*, not infrequently present, does not tend to abate this impression. If, now, we attempt to explain enuresis by including it among the tics or habit spasms, we shall find a number of features that link it closely to this well defined group. First, of course, is the undeniable element of habituation. Second, it reveals itself as a tic in being almost continuous; the bladder tends to empty itself whenever a small quantity of urine has accumulated. The predominance of nocturnal incontinence is due to the absence of distracting influences during sleep, for it is well known that a habit spasm is temporarily suspended when the patient's attention is directed thereto. During the day, the victim of enuresis is powerfully restrained by the force of public opinion and ridicule, though he may forget himself and lose control under some special strain or excitement. Third, there is the frequent association of enuresis with such unquestionable habit spasms as stuttering. Fourth, the age of onset agrees precisely with that of the other habit spasms; the ages of maximum frequency also correspond. Its lesser tendency to persist into adult life is due to its involving the genitourinary tract, which undergoes such radical anatomic and physiologic changes at puberty. Furthermore, some cases of enuresis, especially in females, do persist into adult life, and then become exceedingly difficult to cure, as also happens with other tics.

The rational and, incidentally, most successful treatment of tics consists in making the patient perform voluntarily, under his own or some other person's control, the movement which has been so frequently repeated subconsciously. In carrying out this plan the child is compelled to urinate at regular hours during the day, and is wakened at regular intervals during the night, the intervals being timed so as to anticipate the involuntary act, if possible. Thus, in a moderately severe case, micturition might be enforced on rising, at nine, noon, three, six, at bedtime, an hour after bedtime, and two hours after bedtime, bad cases may require a two-hour interval during the day, and more rousings at night. The essential matter is the accurate observance of the exact hour day by day. Often the training cure, by itself, proves ineffective; a common complaint being that the child is found to be wet every time it is roused, the tic being fully developed and practically continuous during sleep. Here we may aid by cutting off all fluids during the later afternoon and evening, thus reducing the secretion of urine to a minimum by keeping the bladder as nearly empty as possible. Wachenheim always anticipates by including the deprivation of fluids in the plan of treatment, and, in addition, restricts the bulk of the evening meal, even in cases that seem relatively mild.

As to further auxiliaries atropin has a certain adjuvant value, and may be given rather liberally, for small doses are useless. When the tic is, as often happens, associated with a general run-down condition tonic treatment is indicated. When adenoid vegetations or greatly hypertrophied tonsils are present, their removal is indicated, but a conspicuous effect on the enuresis need not be expected, save that the operative shock or the anesthesia may check it, as it may any habit spasm. It is wise to continue the training for a considerable time, at least two months, after the incontinence has ceased; the nocturnal rousings may be omitted after about a month, but the strict observance of the diurnal evacuations should be continued at least a month longer.

9. **Arrest of Early Paresis.**—The principal points in Williams' paper are (1) the necessity of early diagnosis; (2) the need of regulation of metabolism during a mercurial course; (3) the need for careful choice of the manner in which mercury should be administered. Williams uses the injection method, because inunction is inconvenient, uncertain in ordinary practice, and, he believes, less controllable than the injection method.

Medical Record, New York

February 5

10 Pathologic Prodromes of Tabopsaresis. T. A. Williams, Washington, D. C.
11 Local Anesthesia in General Surgery. W. S. Schley, New York.
12 *Skin Lesions of Pellagra. H. Fox, New York.
13 *Rectal Examination as a Routine Measure. F. C. Yeomans, New York.
14 Serodiagnosis of Syphilis. J. DeLisle, New York.
15 *Thrombosis of the Left Iliac Vein. C. S. Aitkin and J. A. Jackson, New York.
16 Tapping the Pleural Cavity. E. M. Foote, New York.

12. Skin Lesions of Pellagra.—Fox claims that the skin lesion of pellagra is rather a dermatosis than an erythema, since desquamation is a marked factor in the lesion. It contrasts with eczema in lacking the element of itching. It is not peculiar to the portions of the body which are exposed to the sun, and naked children show it only in the characteristic locations.

13. Rectal Examination.—Yeomans urges that examination of the rectum should be a routine measure in cases of painful affections of the pelvis and abdomen. The examination is made in the Sims position, and should cause little pain. The anus is inspected; then pressure is made around it with the index finger for tender spots, the patient bears down and the mucosa is gently teased out around it. The index finger, lubricated, is introduced into the rectum where it can reach up four and a half inches. The condition of the rectal walls may be appreciated and the genital organs examined at the same time by touch. Neoplasms will be felt, abscesses and fistulas found, hemorrhoids examined, and many other conditions brought to light. After this the proctoscope may be used and the interior of the sigmoid seen.

15. Thrombosis of the Left Iliac Vein.—Aitken and Jackson report the case of an insane female patient who made no complaints of the bladder, but showed swelling of both lower extremities three weeks before death. It was found that she had an overdistended bladder, which by pressure on the iliac vein had caused thrombosis in the left iliac vein, in both pelvis and thigh. At the post-mortem there was found a suppurative cystitis and acute urethritis of the left side, with inflammation of the pelvis of the kidney.

Boston Medical and Surgical Journal

February 3

17 The Work of the Committee on Milk and Baby Hygiene in Behalf of Babies. J. M. Connolly, Boston.
18 Diagnosis and Treatment of Intussusception. A. R. Kimpton, Boston.
19 Clinical Significance of Curds in Infant's Feces. F. B. Talbot, Boston.
20 Unsuspected Diabetes; Cause of Rapidly Fatal Coma. W. W. Miner, Ware, Mass.

Lancet-Clinic, Cincinnati

January 22

21 Specific Diagnosis and Treatment in Pulmonary Tuberculosis. S. Von Ruck, Asheville, N. C.
22 History of Hygiene. A. G. Drury, Cincinnati.
23 Therapeutic Renaissance. R. A. Bate, Louisville.

January 29

24 Atony and Tonics. N. Rosewater, Cleveland, Ohio.
25 The Question of Change of Climate for the Tuberculous. E. W. Mitchell, Cincinnati.
26 Chorea Insaniens; Acidosis. G. A. Staples, Dubuque, Ia.
27 Rural Sanitation. B. Stanton, Cincinnati.

Medical Fortnightly, St. Louis

January 10

28 The Fear of the Cold. B. Holmes, Chicago.
29 Diffuse Infiltrating Carcinoma of Stomach. J. M. Bell, St. Joseph, Mo.

Journal Michigan State Medical Society, Detroit

January

30 *Foreign Bodies in the Esophagus and Lower Air Passages. P. M. Hickey, Detroit.
31 Indications for Treatment of Calculus of the Kidney, Ureter, and Urinary Bladder. B. Holmes, Chicago.
32 Crime of Neglecting Cases of Uterine Cancer. J. H. Carstens, Detroit.
33 Cervical Rib: Case in which Resection was Performed. A. M. Campbell, Grand Rapids.
34 Treatment of Gastric Ulcer. J. T. Watkins, Detroit.
35 Medical Practice in Bengal, India. A. L. Kennan, Detroit.

30. Foreign Bodies in Esophagus and Lower Air Passages.—The clinical history of Hickey's cases shows the great value of the Roentgen ray as a diagnostic agent, and the superiority of operations through the mouth to external manipulations, especially when the esophagoscope and bronchoscope are used. He says that the first requisite is an operative technic which can best be obtained by practice on the lower animals. Trained assistants are of the utmost value, as on proper anesthesia and proper rigidity of the head and neck during the passage of the tube depends much of the ease with which it can be accomplished.

Bulletin Johns Hopkins Hospital, Baltimore

January

36 Michael Servetus. W. Osler, London, Eng.
37 The Dedication of the New Hall of the College of Physicians of Philadelphia. W. S. Thayer, Baltimore.
38 The Method of Zadig in Medicine. M. G. Seelig, St. Louis.
39 Dr. Lemuel Hopkins, One of the Celebrated Hartford Wits, and a Forgotten Distinguished American Student of Tuberculosis. W. R. Steiner, Hartford, Conn.

Military Surgeon, Washington, D. C.

January

40 Principles of Training. H. G. Beyer, U. S. Navy.
41 Care and Removal of Sick and Wounded on Shipboard During and After an Action. H. G. Beyer, U. S. Navy.
42 Organization of Medical Department and Sanitary Service of the Fleet under Present Conditions; What Organization will best meet the Requirements of the Fleet in View of Future Expansion and Render the Most Efficient Service, both in Peace and War? L. W. Curtis, U. S. Navy.
43 What should Constitute Best Training for Medical Officers Intended for Positions of Fleet and Squadron Surgeons, what Principles Should Determine their Selection for the Positions; Their Duties and Responsibilities in Relation to Fleet Sanitary Efficiency? H. G. Beyer, U. S. Navy.
44 *What should Constitute, in Principle and Practice, the most Efficient Organization of Medical Department of a Ship During Action, Including Provisions for and Methods of Rendering First Aid to Wounded? J. C. Wise, U. S. Navy.
45 *Precise Functions of a Hospital Ship in Time of Peace and in Time of War and its Relation to the Fleet. G. Pickrell, U. S. Navy.
46 The Hospital Ship as an aid to the Efficiency of the Fleet. C. F. Stokes, U. S. Navy.
47 *Most Effective Methods of Keeping Ships of War free from Infective Diseases: The Reception and Housing of Recruits at Barracks and on Receiving Ships. R. C. Holcomb, U. S. Navy.
48 Idem: The Reception and Care of Recruits Received on Board Ship. M. F. Gates, U. S. Navy.
49 Idem: Care of the Crew of a Ship Undergoing Extensive Repairs at Navy Yards. C. N. Fiske, U. S. Navy.
50 Idem: Care and Protection of Crews of Ships in Infected Ports. D. N. Carpenter, U. S. Navy.

44, 45. Abstracted in THE JOURNAL, Nov. 20, 1909, p. 1769.

47. Abstracted in THE JOURNAL, Nov. 27, 1909, p. 1846.

Archives of Internal Medicine, Chicago

January

51 *Chronic Passive Congestion of the Liver. C. Frothingham, Boston.
52 Chronic Aleucemic Enlargement of the Lymphatic Glands. C. W. Duval, New Orleans, and C. P. Howard, Montreal.
53 *Various Forms of Experimental Arterial Disease in the Rabbit. M. C. Hill, New York.
54 *Addison's Disease: One Case with Adrenal Transplantation. F. C. Busch and T. Wright, Buffalo, N. Y.
55 *Total Energy Requirement in Diabetes Mellitus. E. F. Dubois, New York, and B. S. Veeder, Philadelphia.
56 *Syphilis of the Thyroid. C. F. Davis, Chicago.
57 *Peculiarities of Nitrogenous Metabolism in Pernicious Vomiting of Pregnancy. F. P. Underhill and R. F. Rand, New Haven, Conn.

51. Chronic Passive Congestion of the Liver.—The object of Frothingham's work has been to study the clinical history in a series of cases, in order to see if the clinical picture would support the view that an uncomplicated chronic passive congestion would not show any disappearance of liver cells. A series of cases was examined in which the patients had been treated at the Boston City Hospital, and which eventually came to autopsy. It soon became apparent that in the majority of cardiac cases of long standing with broken compensation the liver presented the picture of loss of liver cells around the hepatic veins. Frothingham says that uncomplicated chronic passive congestion of the liver, even in long-standing cases, does not necessarily lead to atrophy and disappearance of liver cells. It is possible, therefore, to imagine their disappearance in other cases as due to something else than long-continued congestion. Hemorrhagic necrosis of the liver is a frequent complication of chronic passive congestion of the liver. This form of liver necrosis probably occurs only in cases with some degree of cardiac insufficiency.

53. Experimental Arterial Disease in the Rabbit.—In the course of his investigation, 210 presumably normal animals were examined by Hill and spontaneous lesions were found

in 15 per cent. The lesions occurred in young (small) rabbits almost as frequently as in old rabbits. Hill says that histologically, the common type of spontaneous lesions cannot be distinguished from that due to adrenalin. Macroscopically, however, it differs from the diffuse lesion of adrenalin by being usually limited to a few foci occurring at the origin of the aorta. The peculiar spontaneous lesion described by Ophüls was not seen by Hill. He claims that the prolonged administration of barium by the mouth does not cause, as has been suggested, the appearance of spontaneous lesions. These spontaneous lesions apparently explain the results previously ascribed to single injections of adrenalin, for a repetition of the "single injection" experiments has given negative results. Likewise, in some groups of experiments, the long-continued administration of adrenalin in fairly large doses has led to the production of the diffuse lesion, considered characteristic of adrenalin, in a comparatively small percentage of animals.

Direct chemical injury, such as painting the vessel with silver nitrate, causes a fibrous thickening of the adventitia and outer portion of the media with calcification of the latter. Direct mechanical injury, as crushing by measured pressure with forceps, leads to atrophy of the media without calcification and to definite proliferation of the intima. The latter type resembles somewhat certain late stages of the adrenalin lesion with intimal proliferation, but neither can be considered analogous to either the spontaneous or adrenalin lesions. Attempts to produce vascular lesions through increasing the blood-pressure by mechanical means, as in the suspension experiments of Klotz, have given Hill negative results.

54. **Addison's Disease.**—One of the cases studied by Busch and Wright gave a typical picture of Addison's disease. The other two presented features which would tend to confuse the observer and increase the difficulty of diagnosis. In one of the cases they made an adrenal transplantation, the patient surviving the operation two and one-half weeks. All three cases terminated fatally.

55. **Energy Requirement in Diabetes Mellitus.**—A carefully conducted series of experiments convinced Dubois and Veeder that the total energy requirement of diabetic patients does not vary from the normal. They say, however, that in addition to the 31-35 calories required for the normal individual at rest, the diabetic should be given enough extra calories to cover the loss of sugar in the urine. If this is not done there is a breaking down of the body protein and fat.

56. **Syphilis of the Thyroid.**—Davis claims that his is the first case of tertiary syphilis of the thyroid—the diagnosis being confirmed by the anatomic findings—to be reported in American literature; the third reported in the English language, and the eleventh in the entire medical literature.

Twenty cases of gumma of the thyroid have been described. Eight of these were diagnosed only clinically without any definite anatomic proof of their syphilitic origin; 3 cases were diagnosed both clinically and histologically, 8 cases were diagnosed histologically. The remaining case was probably diagnosed clinically—it is specifically stated that histologic examination was not made.

Davis' patient complained of hoarseness, great inspiratory dyspnea and pain on swallowing. The trouble had appeared four months previously, when the patient developed the above symptoms. This condition was constant and was subject to exacerbations at rather frequent intervals, in which the dyspnea was so great that the patient became cyanosed. Hoarseness was marked. There was history of syphilis five years previously; the patient had never suffered from any other serious illness. Examination of the larynx disclosed a paralysis of the adductor muscles. The neck was somewhat tender in the region of the thyroid cartilage; otherwise examination of the neck was negative. Tracheotomy was performed under local anesthesia, and a tube inserted with no relief to the patient; death followed about twelve hours later.

57. **Pernicious Vomiting of Pregnancy.**—Underhill and Rand found that the composition of the urine in pernicious vomiting is strikingly similar to that which obtains in the urine eliminated during inanition. In both instances the characteristic perversions are changed relations in the excretion of urea and ammonia and at times in the output of creatinin and creatin. Other changes previously reported in the nitrogen output have not been firmly established. The determination of nitrogen, ammonia, creatinin and creatin in pernicious vomiting is believed to be of greater value than the more elaborate plan suggested by others, inasmuch as the methods to be employed are accurate.

It is suggested that the changes observed in the urine in pernicious vomiting of pregnancy are induced by accompanying inanition. Evidence tending to substantiate this view is furnished by the observation that the perverted urinary nitrogen relations rapidly resume the normal on administration of food without necessarily exerting any influence on the pathologic state of the patient. In pernicious vomiting of pregnancy in which inanition is a significant factor, the administration of energy-yielding foodstuffs is of greater value than the giving of foods rich in nitrogen. The body is capable of furnishing the small quantity of nitrogen requisite for nutritional rhythm, but, in the absence of carbohydrate, energy-yielding substances present in the body are difficult of utilization. It is, therefore, suggested that the employment of enemas of dextrose solutions by the Murphy drop method is a more rational proceeding in this and related conditions than attempts to administer the usual albumin solution, which in all probability is not absorbed and for which the body has relatively little need. Carbohydrate supply is apparently the factor determining the relative output of urea and ammonia, since in pernicious vomiting of pregnancy as in inanition, the administration of this substance by mouth or by rectal enemas is followed by a distinct tendency toward a resumption of the normal elimination of these compounds.

Chicago Medical Recorder

January

58 Water Supply and Sewage of Lake Shore Towns of Lake County. W. C. Bouton, Waukegan, Ill.
59 Oral Prophylaxis. M. W. Dunn, Chicago.
60 Mercury and Locomotor Ataxia. C. E. Rogers, New York.
61 *The Nation and the Tropics. W. Osler, Oxford, Eng.

61. Published in the *Lancet*, Nov. 13, 1909.

Ohio State Medical Journal, Columbus

January

62 Diagnosis and Treatment of Extrauterine Pregnancy. H. Robb, Cleveland.
63 Absence of Vagina; Embryology, Pathogenesis and Treatment. L. G. Bowers, Dayton.
64 Diagnostic Significance of Liver Palpation. H. W. Bettman, Cincinnati.
65 *Mind and Medicine. J. S. Rardin, Portsmouth.
66 *Method of Opening the Mastoid Antrum through the External Auditory Meatus as the First Step in the Mastoid Operation. S. Iglauer, Cincinnati.
67 The Rectal Colonic Tube: Its Uses and Abuses. U. S. G. Deaton, Toledo.
68 Ophthalmia Neonatorum from the Standpoint of the Obstetrician. W. Gillespie, Cincinnati.

65. Abstracted in THE JOURNAL, May 29, 1909, p. 1783.

66. **Method of Opening the Mastoid Antrum.**—As a result of experience gained from experiments on the temporal bone and the cases reported, the following advantages are claimed by Iglauer for the operation of opening the antrum through the meatus as the initial step in the mastoid operation: 1. The procedure is justified on anatomic grounds, since the anterior inferior wall of the antrum is very thin, and no important structures intervene between the meatus and the antrum. 2. The antrum may be readily and rapidly opened through the meatus, no matter what its depth from the surface, and the burr is kept in full view throughout the operation. 3. The exposure of the antral cavity early in the operation gives valuable information concerning the condition of the mastoid bone. 4. With the antrum fully exposed to view, the remaining steps of the mastoid operation are much simplified. 5. In cases complicated with a forward-lying sinus, it often becomes imperative to work from within outward, and the direct method through the meatus does away with the necessity of introducing instruments into the middle ear, a procedure not unattended with danger. 6. In cases in which the simple operation has been performed, the healing process may be hastened if a portion of the posterior bony meatus is removed at the time of operation. 7. The

electric burr is a safe instrument in mastoid surgery, since it is not apt to penetrate the dura mater and stimulates the facial nerve before endangering its integrity.

Long Island Medical Journal, Brooklyn

January

69 Progress of Medicine for 1909. H. G. Webster, Brooklyn.
70 Progress of Surgery. W. A. Sherwood, Brooklyn.
71 Progress in Dermatology and Syphilology. J. M. Winfield, Brooklyn.
72 Progress in Ophthalmology. J. C. Hancock, Brooklyn.
73 Progress in the Sciences of Ear, Nose and Throat Surgery. W. C. Braislin, Brooklyn.

Bulletin Lying-in-Hospital of City of New York

March, 1909

74 *Abdominal Pregnancy; Operation and Recovery. A. B. Davis, New York.
75 Nephritis in the New-Born Infant. G. W. Kosmak, New York.
76 Two Cases of Cavernous Angioma in Infants. A. B. Davis, New York.
77 *Possible Danger Connected with Intrauterine Irrigations. G. W. Kosmak, New York.
78 Significance of Posture in Obstetrics. A. F. A. King, New York.
79 Excessive Transitory Hypertrichosis Due to Pregnancy. C. F. Jellinghaus, New York.

June, 1909

80 Pyelitis in Pregnancy and its Complications. F. E. Sondern, New York.
81 Effect of Hemorrhage on the Condition of the Blood. E. C. Smith, New York.
82 *Pathology of Eclampsia and Toxemia of Pregnancy. J. E. Welch, New York.

74. **Abdominal Pregnancy.**—The abdomen in this case was flat, except in the right lower quadrant, wholly to the right of the median line and extending up from the pelvis midway to the umbilicus, where a large tender elastic rounded mass could be felt. It was not freely movable. Complete chloroform anesthesia was induced and the examination continued. The perineum was intact and the vaginal mucous membrane cyanosed. The cervix was high, centrally located, intact, partially softened and the canal closed. Bimanually, the uterus was found to be slightly enlarged, in a median and anteverted position. The mass above mentioned was found extending directly from the uterus to the right and posteriorly and restricting its mobility. The left side of the pelvis and iliac fossa were found to be clear and free.

The abdomen was opened in the median line by a 12 cm. long incision, well down toward the pubes. The peritoneum was found to be unusually thick, and on opening it a quantity of thin black fluid blood appeared free in the abdominal cavity. The uterus was found practically as described in the bimanual examination, only it was more pushed forward and over toward the left. There was also a smooth, rounded, blue, ovoid cyst extending up from the pelvis half way to the level of the umbilicus. This cyst was ruptured in attempting to lift it up through the abdominal opening. About 800 c.c. of amniotic fluid escaped and floated a well-formed dead fetus of about four-months' growth into view. There was a well-formed placenta attached to the right broad ligament, the posterior wall of the uterus and the right side of the cul-de-sac. The placenta was readily removed, leaving a dirty, yellowish-brown surface with clots, but no fresh bleeding. Long clamps were applied so as to include the right tube and ovary and a triangular portion of the broad ligament; the artery was ligated outside the clamps and the tissue between them cut away and the clamps removed. The raw edges were brought together with a continuous catgut suture. A considerable cavity was thus formed, and about half the length of the appendix was found overhanging the upper edge of this cavity. It was lifted up and found to be surrounded largely with old adhesions. These were broken up and an appendectomy done, the stump cauterized and closed over with peritoneum. The posterior vaginal vault was opened from above with blunt scissors. A strip of iodoform gauze was passed out into the vagina, and all about the placental site was packed with the same material. The abdominal wall was closed in three layers and a sterile dressing and a binder applied. The patient made a perfect recovery.

77. **Danger Connected with Intrauterine Irrigations.**—Kosmak calls attention to the possibility of forcing more or less f the irrigating fluid used to wash out the cavity of the uterus after curettage, through the Fallopian tubes into the general peritoneal cavity. Kosmak reports a case in which, after curettage, the uterine cavity was irrigated in the usual and customary manner, with hot, sterile normal salt solution. A return flow irrigating tube was employed, and although the cervix shut down on it, the heat, no doubt, having stimulated the muscle to contraction, the fluid was apparently all returned. The abdomen was then opened by a median incision for the purpose of doing a ventral suspension operation. Much to Kosmak's surprise, on entering the peritoneal cavity, he found a considerable amount of thin, slightly blood-stained fluid, as to the origin of which he was very much in doubt. There had been no previous evidence of ascites, and the fluid did not appear like the fluid encountered in this condition. He finally came to the conclusion that it must have been the irrigating fluid which had found its way out through the tubes into the general peritoneal cavity.

Within the first twenty-four hours after operation the abdomen had become very much distended and the pain was extremely severe. The face had an anxious look; the tongue was coated; the pulse ranged from 120 to 140; the abdomen was distended and very tender. No flatus was passed, even after the introduction of a rectal tube. The administration of calomel and salts, followed by an enema, did not give the desired result, nor was the paralysis of the intestine relieved by hypodermic injections of eserin sulphate. By the end of the second day the woman's condition seemed serious, she was vomiting almost constantly a greenish fluid, which sometimes had a fecal odor, the tongue was coated, there was considerable dyspnea, the abdominal tension and tenderness were very much increased.

The necessity of securing immediate relief from the condition of intestinal paresis, prompted the administration of croton oil, and two drops mixed with bread crumbs were accordingly administered. The result was excellent, and the patient passed a great quantity of gas and some fecal matter within a few hours. Although some abdominal pain remained, the general condition improved rapidly and nothing further occurred to disturb recovery. The woman was discharged from the hospital at the end of three weeks. For some months afterward she had more or less abdominal pain, particularly if there was any accumulation of gas or if the bowels had not moved sufficiently for several days, giving one the impression as if these disturbances were due to the presence of intestinal adhesions of slight degree.

82. Published in THE JOURNAL, Oct. 23, 1909, p. 1358.

Journal Delaware State Medical Society, Wilmington

January

83 Plea for Early Diagnosis of Gall-Stones. J. P. Wales, Wilmington.
84 Urgent Need of Early Diagnosis in Gynecologic Disease. H. M. Thompson, Wilmington.
85 Progress in Medicine. H. J. Stubbs, Wilmington.

Providence Medical Journal

January

86 Treatment of Tuberculosis. J. Perkins, Providence.
87 Clean Milk Supply for the State Sanatorium. F. P. Gorham, Providence.
88 The State's Insane. A. H. Harrington, Howard, R. I.
89 State Commitment of the Insane in Rhode Island: A Barbaric Survival. J. E. Donley, Providence.

Journal South Carolina Medical Association, Florence

December

90 Cholecystitis. C. F. Ross, Anderson.
91 *Expeditious Method for Submucous Resection of the Triangular Cartilage of the Nose. W. P. Porcher, Charleston.
92 Significance of Angiosclerosis in the Eye. C. W. Kolloch, Charleston.
93 Retropharyngeal Abscess. E. W. Carpenter, Greenville.
94 Pathologic Significance of Diseased Tonsils. J. F. Townsend, Charleston.
95 Appendicocecostomy for the Relief of Mucous Colitis and Chronic Diarrhea. H. R. Black, Spartanburg.
96 Recent Discoveries Pertaining to Digestion and Intestinal Disorders. F. Moore, Aiken.
97 Visceral Syphilis. J. B. Sosnowski, Charleston.
98 The Social Evil. D. W. Richardson, Greers.

91. **Submucous Resection of Triangular Cartilage of Nose.**—In Porcher's case, the triangular cartilage was found to be dislocated on the right side, causing considerable flattening of the end of the nose and almost complete occlusion of that nostril. After dissecting up the mucous membrane over the dislocated portion of the cartilage, Porcher decided to use the electric trephine instead of the knife or forceps because the

cartilage proved to be very tough and situated somewhat further back in the nose than usual. With a rather long Curtis trephine two large cones of cartilage were drilled away, the trephine passing through the mucous membrane in the rear. The projecting ends of the cartilage having been removed, the septum resumed its erect position. The mucous membrane was allowed to fall back into position and a compress of cotton was used to hold it so until union took place, which was by first intention.

Porcher asserts that an excellent feature of this operation is that perforation rarely occurs. Unless the angle of deflection of the septum is extremely acute, it is almost impossible to produce a perforation. In a straight septum, the trephine would have to be held at right angles to the partition to penetrate through it, and therefore this accident would only be likely to happen in proportion to the acuteness of the angle or the amount of deflection present.

Archives of Ophthalmology, New York

January

99 After-Effects of Escape of the Vitreous. A. E. J. Lister, London.
100 One Hundred and Twenty-one Cases of Extraction of Cataract in the Capsule, by the Method of Major Henry Smith, Jullundur, India. C. F. Clark, Columbus, Ohio.
101 Case of Cyst of the Iris. D. Webster, New York, and E. L. Oatman, Brooklyn.
102 Dilatation of the Pupil due to Bellflower, "Datura Arborea." J. S. Fernández, Havana, Cuba.
103 Spectrographic Studies Concerning the Limits of Absorption of our Protective Glasses. O. Hallauer, Basle, Switzerland.

West Virginia Medical Journal, Wheeling

January

104 The Public and the Physician. C. S. Hoffman, Keyser.
105 Enlargement of the Prostate. R. C. Bryan, Richmond, Va.
106 Arithmetic of Milk Modification. J. T. Thornton, Wheeling.
107 End-Results in Fractures of the Long Bones. S. M. Mason, Clarksburg.
108 The Essential Character of Hysteria. T. A. Williams, Washington, D. C.

Journal of Cutaneous Diseases, New York

January

109 Dermatitis Exfoliativa with Fatal Ending in Five Cases. J. T. Bowen, Boston.
110 Treatment of Alopecia Areata and Dermatitis Exfoliativa. G. T. Jackson, New York.
111 *Two Important Parasites of the Skin. E. Costa, Padua, Italy.
112 Certain Diseases of the Skin Observed in the Far East. L. D. Bulkley, New York.
113 Pellagra in Massachusetts. C. P. Fitzgerald, Worcester, Mass.

111. **Parasites of the Skin.**—Costa describes two cases of skin invasion by animal parasites, one the *Dermatobia noxialis* found in some tumefactions on the head, the other the *Sarcopsylla penetrans* found in ulcerations in the region of the nails of the feet.

Detroit Medical Journal

January

114 Medical Defense. E. B. Tibbals, Detroit.
115 Suggestion as a Therapeutic Factor. C. F. Kuhn, Detroit.
116 The Internal Secretion of the Testes. W. M. Donald, Detroit.
117 Early Symptoms of Cancer of the Rectum. L. J. Hirschman, Detroit.

Quarterly Bulletin Northwestern University Medical School, Chicago

December

118 *Food Preservatives and the Benzoate Question. J. H. Long, Chicago.
119 Principles of Treatment of Wounds. J. F. Churchill, Chicago.
120 *Transplantation of Spinal Ganglion into Brain. S. W. Ranson, Chicago.
121 Observations on Sahli's Desmoid Reaction. A. A. Goldsmith, Chicago.
122 Occurrence of *Bacillus Fusiformis* in Membranous Affections of the Throat—Vincent's Angina. M. L. Holm, Lansing, Mich.
123 Nasal Cauterization. O. H. Maclay, Chicago.
124 *The Long Incubation Periods of Syphilis. F. E. Simpson, Chicago.
125 Forthcoming Revision of the Pharmacopeia. J. H. Long, Chicago.

118. **Food Preservatives and the Benzoate Question.**—The simplest thing to add to prevent fermentation, says Long, is an excess of cane sugar, but the very great sweetness which results is an objection to many, and the custom therefore prevails of using in place of part of the sugar a considerable amount of spice, generally cloves and cinnamon. This is in every way legitimate, but these substances are preservatives, and it is for this and not alone for flavor, that they are needed. The bulk of the spice is cellulose or related material, and absolutely inert so far as preserving or flavoring action is concerned, but with the cellulose there are certain essential oils present which are the valuable and active constituents. These active principles are called "natural" substances, but they are "chemicals" at the same time, and they may be made by laboratory methods from substances foreign to the spices and with the same properties found in the spice extractives. If there is no objection to the spice products, why should there be, asks Long, to the same active principle made in an artificial way? Any one, Long continues, who is familiar with the advances of modern synthetic organic chemistry must be able to recognize that there should be no inherent difficulty in thus replacing the active principles of the aromatics with compounds no more harmful than they are, but without marked taste or odor.

In the Northwestern University laboratories six men were under Long's observation, through a period of four months, on a diet far richer in benzoate than they could find in any of the foods on the market which the consumer would be likely to reach. From these experiments and through subsequent studies Long has become convinced of the relative harmlessness of the sodium benzoate as used in the condimental foods. That is, he believes that it is less harmful than the other acid and aromatic bodies used for the same purposes. The experimental work was painstaking, and was carried out through a period long enough to satisfy any reasonable demand. The peculiar conditions described in the "poison squad" bulletin of the Bureau of Chemistry were not observed, and Long believes under proper methods of experimentation they should not be in any case. The men were not fed with capsules, they were not told that they were eating poison, or that they were engaged in a very dangerous experiment. The "poison squad" notion was not kept constantly before them. Long is willing to believe that with the probable psychic disturbances from the causes suggested always present, these men, also, might have become ill occasionally, perhaps frequently. The psychic factor is very important in such work, and he is inclined to think that it may have played a very prominent part in the Bureau of Chemistry results.

Chemically, sodium benzoate is a mild substance and in its ultimate behavior and fate not unlike the aromatic principles of cinnamon and cloves. Indeed, cinnamic aldehyde seems to follow exactly the same course in metabolism, and both are doubtless much weaker physiologically than is the eugenol of cloves. A great deal, continues Long, has been said about the activity of the "interests" in favoring sodium benzoate. It should be apparent to any one who can read, that other and certainly much noiser "interests" are violently fighting it. Medical men should not, he says, be fooled by the situation, or influenced by the silly assertion that the members of the Referee Board are prejudiced, or that they are working in favor of any interest except that of scientific truth.

120. **Transplantation of Spinal Ganglion into Brain.**—Ranson used white rats, two for each experiment. The animal to receive the graft was a month old. Its head was prepared and a small strip of bone removed parallel to the great longitudinal sinus and an incision made in the cerebral cortex in line with the bone defect. A warm pack was then placed over the wound and the second cervical ganglion removed from the neck of a rat one week old. The ganglion was grasped with fine forceps by the short stretch of attached nerve and inserted into the brain wound in such a way that the nerve was deepest in the wound, and the ganglion just beneath the cortex.

Two animals were allowed to live ten days and one two months. The brains from the first two animals were examined for the site of the graft, and this with a piece of the surrounding cortex was excised. Paraffin sections from these were stained with toluidin blue and erythrosin. The third brain was prepared by the Pal-Weigert method and counterstained with Upson's carmin. The sections from the brain of Rat I containing a graft of ten days' standing shows the spinal ganglion imbedded in the substantia alba just dorsal to the radiations of the corpus callosum. It was easily recognized by the abundance of connective tissue and by the

presence of the round or polygonal cells characteristic of the spinal ganglion. These were arranged in the shape of a horseshoe, two or three cells deep, around the periphery of the ganglion on the side toward the corpus callosum. All nerve cells had disappeared from the interior of the ganglion. The surviving cells were in various stages of chromatolysis, but the majority of the cells showed only partial solution of the tigroid masses. These cells were much swollen and their nuclei were excentric. No small nerve cells could be seen. These were more susceptible to injury than the larger cells and rapidly disappeared from the transplanted ganglia. Substantially the same conditions were to be seen in Rat II, also representing a ten-day graft.

The spinal ganglion which was allowed to remain in the brain for two months was not as deeply placed as the others, but was imbedded in the cortex near the great longitudinal fissure and covered over by a proliferation of the pia mater. The ganglion was much decreased in size and surrounded by scar tissue. It contained only a small fraction of the number of cells to be found in the normal ganglion but these few cells were of normal appearance, so far as could be ascertained by the carmine stain. The shape and size of the cell body, the position, size and contour of the nucleus and the absence of any proliferation of the nuclei or their capsules justify one in assuming that these cells did not undergo degeneration but survived the transplantation and would continue to exist indefinitely in their new position. A few medullated nerve fibers could be seen in the ganglion. These were gathered together in a bundle which could be traced for some distance in the scar when a series of these sections were studied.

124. **Long Incubation Period of Syphilis.**—In Simpson's case the onset of the characteristic symptom of "the secondaries"—the roseola—was 142 days after the infection. The length of the first incubation period was ten days and of the second incubation period 132 days.

St. Louis Medical Review

December

126 Gonorrhea in the Male, and its Treatment from the Viewpoint of the Present. H. J. Scherck, St. Louis.
127 Metastasis in Carcinoma. G. McConnell, St. Louis.
128 Civilization: Yesterday—To-day—To-morrow. B. M. Ricketts, St. Louis.

American Journal of Public Hygiene, Boston

November

129 Sanitary Supervision of Communicable Diseases by the Department of Public Health. R. G. Brodrick, San Francisco.
130 *Results of Federal Control of the Manufacture of Viruses, Serums, Toxins, and Analogous Products. J. F. Anderson, Washington, D. C.
131 *Scope of Public Health work in the Prevention of Dependence. H. Folks, New York.
132 Care of Phthisis in Children Through the Out-Door School. C. Floyd, Boston.
133 Day Camp Treatment for Tuberculosis. D. Townsend, Boston.
134 Educational Measures for the Prevention of Tuberculosis. A. M. Wilson, Boston.
135 Home Management of Consumptives. S. F. Cox, Boston.
136 Veterinary Hygiene. W. L. Beebe, St. Paul.
137 Municipal Sanitation. C. V. Chapin, Providence, R. I.
138 Sanitary Engineering Notes. R. S. Weston.
139 Chemical Laboratory Notes. F. C. Robinson, Brunswick, Me.
140 Biologic Laboratory Notes. F. P. Gorham, Providence.
141 Public Health Legislation, News and Notes. F. H. Slack, Boston.

130, 131. Abstracted in THE JOURNAL, Nov. 27, 1909, pp. 1843, 1845.

Journal of Abnormal Psychology, Boston

January

142 Personal Impressions of Sigmund Freud and His Work. J. J. Putnam, Boston.
143 The Dyschiric Syndrome. E. Jones, Toronto.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

January

144 *Action of Urea and of Hypertonic Solutions on the Heart and Circulation. J. A. E. Eyster and A. G. Wilde, Charlottesville, Va.
145 *The Gastrointestinal Absorption of Drugs: Action of Phenol on Absorption. T. Sollmann, P. J. Hanzlik and J. D Pilcher, Cleveland, Ohio.
146 Toxicity of Dextro-Camphor, Lævo-Camphor, and Inactive Camphor. W. E. Grove, Madison, Wis.
147 Apparatus for Recording the Outflow of Liquids. W. R. Williams, New York.

144. **Action of Urea and Hypertonic Solutions.**—The experiments described by Eyster and Wilde confirm the earlier results of Lambert concerning the effects of urea on the frog's heart. Urea produces stimulation of the frog's and terrapin's heart. Similar stimulation results from the action of hypertonic solutions of sodium chlorid and of glucose. Urea is effective, however, in isotonic solution, and, the author claims, the action must be regarded therefore as a specific one of urea. In the mammal, hypertonic solutions of urea, sodium chlorid or glucose produce in moderate doses intravenously a transitory marked increase in cardiac output, vasodilation and fall of blood pressure. With larger doses, the cardiac output is decreased and the fall of blood pressure is greater. These immediate effects are followed by an increase in cardiac output and dilatation of the kidney and intestines which develops gradually and continues for a long period. The experiments leave undecided the relative quantitative action of these different substances in the above effects. All that can be said is that there is no striking difference evident and the effects of sodium chlorid and glucose would seem to be approximately equal to those produced by a solution of urea of equal concentration. The increased cardiac output would seem to be a factor in the diuresis caused by the injection of urea or salt solutions, in that it maintains a normal pressure notwithstanding the vascular dilatation in the kidney and intestines. The immediate increase in cardiac output and vasodilatation produced by the injection of urea, sodium chlorid and glucose in hypertonic solutions, would seem to be independent of the production of hydremia and to be referable to a specific effect of these substances. Hydremia may, however, be the partial or sole explanation in the permanent effects on the cardiac output and caliber of the blood vessels described above.

145. **Action of Phenol on Absorption.**—From carefully conducted and extensive experiments the authors conclude that when phenol is placed in the alimentary canal, the absorption is at first very rapid, but is quickly checked and soon practically arrested. The absorption curve varies for different individuals, but the general phenomena are constant, and the average figures for several series agree well. When phenol is placed in the stomach, only traces pass into the intestine; a large proportion could be removed by gastric lavage, even several hours after the phenol was taken. Only traces of phenol are excreted into the alimentary tract. The prolonged presence of phenol, therefore, is not due to re-excretion.

Phenol also checks the absorption of iodid and of alcohol. The retention of phenol is not due to corrosion, for (a) the absorption is delayed rather than favored by dilution; (b) the presence of food probably also hinders the absorption; (c) alcohol hinders the absorption; (d) irritation by formaldehyd favors the absorption; (e) injury of the intestinal epithelium by sodium fluorid does not check absorption; (f) a variable amount of phenol may be absorbed after death. Phenol checks absorption even without local contact—for example, when it is inclosed in a ligated loop of intestine. The degree of absorption is not influenced by the length of the intestinal surface to which the phenol is applied. The interference with further absorption is proportional to the amount of phenol which has been absorbed into the circulation; and not to the amount which is present in the alimentary tract. On the other hand, local changes in the intestinal circulation have the most conspicuous effect on the absorption, generally in the sense that local vasoconstriction diminishes absorption, while local vasodilatation increases absorption. Irritation may act in either direction, according to its grade. A large proportion of the unabsorbed phenol exists in the gastric or intestinal wall in such a way that washing removes it only very slowly and imperfectly. This obtains whether the phenol is administered during life or after death. By measuring the circulation time, it could be demonstrated that absorbed phenol slows the intestinal circulation in a specific manner, quite independently of the changes in carotid pressure. The direct local action of the phenol tends to increase the intestinal circulation, but this tendency is quickly overcome by the systemic action when the phenol is absorbed. It appears, therefore, that the inhibitory effect of phenol on absorption is not due to toxic action on the epithelium, but to a specific slowing of the intestinal circulation.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

January 22

1 Problems Relating to Evolution of the Brain. G. E. Smith.
2 Congenital Acholuric So-called Hemolytic Jaundice in One Family. F. P. Weber and G. Dorner.
3 *Simple Method of Fixation of Complement in Syphilis. J. Sabrazes and K. Eckenstein.
4 Glare, Its Causes and Effects. J. H. Parsons.
5 Pyopneumothorax Due to an Inhaled Tooth or to a Perforation of a Gastric Ulcer; Drainage; Recovery. W. G. Nash.
6 Nephrolithotomy; Use of the Ureter Catheter. J. Clay.
7 Acute Cerebrospinal Meningitis with Severe Choreiform Movements. J. P. Johnson.
8 *Twelve Successive Perforations of Stomach or Duodenum; Eleven Recoveries. T. Carwardine.
9 The Circulatory System (continued.) H. Campbell.

3. **Fixation of Complement in Syphilis.**—The method which Sabrazes and Eckenstein use is practically that of Hecht. The following materials are required: (1) Alcoholic extract of heart muscle (antigen); (2) sheep's blood corpuscles; (3) saline solution (9 per 1,000); and (4) serum to be examined. The tubes are arranged in three rows. The unit generally used is 100 cubic millimeters. The following solutions are added: To Tube 1: One unit of serum, 1 unit of saline solution, 1 unit of antigen. To Tube 2: One unit of serum, 2 units of antigen. To Tube 3: One unit of serum, 2 units of salt solution. The last tube acts as a control. The tubes are incubated at 37 C. for about one and one-half hours. One unit of sheep's corpuscles is added to each tube, and the whole returned to the incubator until hemolysis has taken place in the control tubes. This generally occurs in from ten to thirty minutes. The tubes are then placed in the ice chest until sedimentation of the non-hemolysed corpuscles has taken place. It would seem that the best time to perform the reaction is from six to twelve hours after the blood has been withdrawn, as this interval allows the clot to retract firmly and furnishes a clear serum.

A positive result is obtained when there is no hemolysis in the first and second tube, but hemolysis in the third tube; a negative result when hemolysis takes place in all three tubes. A trace of hemolysis in the first tube, provided that the second remains clear, may be taken to indicate a positive result. In cases which have been followed from the commencement of treatment, the authors have noticed that the reaction begins to disappear in this way. Should there be complete hemolysis in the first tube and no hemolysis in the second, they regard the result as being negative. Twenty cases have given this result. Of these, 13 were controls, 2 were persons married to syphilitics, but apparently themselves not affected by the disease, 3 were individuals with long-standing syphilis which had been very well treated; the other 2 were hereditary syphilitics and a suspect. Moreover, with a subject certainly non-syphilitic, and whose reaction has been tested on nine different occasions during a period of six months, the above result was obtained twice.

8. **Perforation of Stomach or Duodenum.**—Carwardine attaches great importance to rapid operation, the avoidance of irrigation of the peritoneum, and free drainage, followed by elevation of the patient's body, early feeding by the mouth, and the administration of continuous saline solution by rectum immediately after operation. Inasmuch as subphrenic abscess and empyema are frequent remote causes of death, Carwardine declares that it should be the rule to drain the right and left subphrenic regions in every case of perforated gastric or duodenal ulcer with extravasation, as well as the suprapubic region.

British Medical Journal, London

January 22

10 Gynecologic Difficulties of the General Practitioner. G. E. Herman.
11 Antiferment Treatment of Acute Suppuration. D. MacEwan.
12 *Vaccine Treatment of a Series of Staphylococcus Infections. A. C. Begg.
13 Ulceration of Face and Fauces Treated by Bacterial Vaccines. J. C. MacWatters.
14 *Vaccine Treatment of Pyelonephritis in Pregnancy. C. F. Routh.
15 *Treatment of Gonorrheal and Mixed Infections of Female Genital Tract by Lactic Acid Bacilli. D. Watson.
16 Early Symptoms of General Paralysis; Recovery Under Soamin. R. Prichard.
17 Intravenous Injections of Soamin in Cerebrospinal Meningitis. T. A. Johnston.
18 Treatment of Sleeping Sickness. R. Van Someren.
19 Treatment of Phthisis and Other Conditions by Arylarsonates. R. A. Lundie and R. H. Blaikie.
20 *Pemphigus Neonatorum Occurring in Practice of a Midwife. M. M. Smith.

12. **Vaccine Treatment of Staphylococcus Infections.**—Begg is convinced of the efficacy of vaccine treatment in most staphylococcus infections. Staphylococcus skin lesions, however chronic, are curable by its means; in many cases estimation of the opsonic index is unnecessary. The best results are only obtained by the use of autogenous vaccines.

14. **Vaccine Treatment of Pyelonephritis.**—A young married woman, aged 30, with one child aged 7, had suffered from the age of 14 from chronic constipation and an "irritable bladder," with frequent micturition. For many years also she had been unable to lie on the left side for any length of time, as that position always caused pain in the right loin sufficiently severe to awaken her if asleep. In June, 1907, she suffered from an attack of acute pain running up from the right iliac region toward the right kidney, with tenderness over the appendix, which lasted some days. She enjoyed good health until June, 1908, early in which month she became pregnant. On October 1 she had another attack of pain, similar to the first, lasting several days and accompanied by fever. This was also looked on as a mild attack of appendicitis. On Jan. 2, 1909, she had a severe rigor, followed by acute pain in the right iliac joint. This was followed on January 4 by vomiting. January 6 she was evidently acutely ill: temperature 103 F.; pulse 120; constant vomiting and great abdominal tenderness, especially over the appendix; and pain running from the ascending colon to beneath the liver. Micturition was frequent and painful, and there were severe rigors followed by profuse perspiration and great exhaustion. On Jan. 9, 1909, pus was found in the urine, which was acid and free from smell.

It became evident that the trouble was due to some lesion in the right kidney. A pure culture of *B. coli* was obtained from the urine, and from this a vaccine was prepared. The opsonic index was 1.8. The first injection was given on January 12, and within six hours the temperature fell from 104 F. to normal, and the pulse which had varied from 120 to 160, fell to 104. Five days after the injection the opsonic index was 2.5. From this date to January 24, the pulse never rose above 104, nor the temperature above 100 F., though all other symptoms remained as acute. On January 24 two rigors occurred, and the temperature rose to 102 F., only to fall to subnormal the next day, at which point it remained. The patient was kept in bed on light diet, and gradually increasing doses of vaccine were given every eighth day until six had been administered. On February 28, a healthy female child was born, the labor being perfectly normal. The patient made an uninterrupted recovery, and three weeks later the urine was free from pus and *B. coli*.

15. **Treatment of Gonorrheal Infections of Female Genital Tract.**—After a thorough disinfection of the parts (including curetting when necessary), all excess of disinfectant is removed and the lactic fluid introduced into the vagina. The first effect of the treatment, says Watson, may be an increase in the amount of discharge, which, however, is completely altered in character. The purulent appearance ceases, and the discharge is white and thin. This is removed daily by gentle swabbing with dry wool through a speculum. In the most favorable cases the secretions are normal in a few days. In other cases the treatment is repeated weekly until cure is complete, usually in from two to three weeks. Even patients in whom the tubes are involved seem to benefit by the treatment and can be discharged from hospital earlier than used to obtain.

20. **Pemphigus Neonatorum.**—A malignant outbreak took place in the practice of a midwife. There were 4 cases, 3 of which were fatal. The midwife attended 7 other lying-in-women during this time, none of whose children developed the disease. In all the cases the mothers did well, and there was no history of sepsis. There was no infection of other members of the household. The original source could not be traced. So far as could be ascertained syphilis did not play any part in the disease, and no information was obtainable

that the midwife had any septic illness. The organism found was *Staphylococcus pyogenes aureus;* it did not differ appreciably from the ordinary variety.

Medical Press and Circular, London

January 12

21 Symptomatology of Dilatation of the Stomach. R. Bousquier.
22 *Simple Operation for Hammer-Toe. W. I. de C. Wheeler.
23 Syphilis and Marriage. C. W. MacGillivray.
24 Flies and Fleas as Factors in Dissemination of Disease; Effect of Petroleum as an Insecticide. J. S. Purdy.
25 Pyorrhea Alveolaris and Other Conditions Causing Septic Mouths. W. H. Dolamore.

January 19

26 Significance of Involuntary Muscular Contractions and Behavior with Atropin as Regards Pathology, and Treatment of Gonorrhea in the Male. C. Schindler.
27 Roentgen-Ray Treatment of Nervous Itching of the Skin. H. W. Schmidt.
28 Why Have We English "Members" and Scotch "Licentiates?" J. C. McWalter.

22. Operation for Hammer-Toe.—The hammer-toe is encircled by rubber tubing held in position by an artery forceps on the dorsum of the foot. This tubing is applied prior to the injection of a local anesthetic. An elliptical incision is made which freely exposes the joint, when the skin bearing the corn is removed. The tubing prevents diffusion of the local anesthetic. This incision gives free access to the affected joint, and at the completion of the operation the suturing of the margins of the wound brings the toe into a straight position without the aid of any splint. The central strip of the extensor tendon is divided and the head of the first phalanx protruded through the lateral portions. The head is now removed freely with a bone forceps or fine saw, and the toe brought into position by the approximation of the widely separated skin edges. A collodion dressing is applied, and over it a strip of adhesive strapping. It is laid over the wound and proximal phalanx, with the adhesive surface uppermost; the ends are then passed under the adjoining toes, to which they become fixed. This counteracts any tendency to hyperextension of the affected digit. The patient from the first is allowed to walk about in an easy shoe, and after a fortnight all dressings are discarded.

Australasian Medical Gazette, Sydney

December

29 *Case of Botryomycosis in Man. A. G. Butler and D. A. Welsh.
30 Artificial Feeding in Infants. E. E. Bourne.
31 Cerebrospinal Meningitis Treated by Vaccine. J. F. Flashman and F. H. Furnival.
32 Points in Isolation of Organisms in Cases of Food Poisoning. B. Bradley.
33 Tidswell's Researches on Australian Venoms. R. Pulleine.
34 Clinical Aspects of Acetonuria. H. J. Ritchie.
35 Decompression in Treatment of Fracture of the Base of the Skull. A. M. Cudmore.

29. Botryomycosis in Man.—The patient, a healthy boy of 4 years, had had for nearly a year a swelling outside the left orbit. The swelling was over the left temporal bone, and there was apparent softening of the bone outside the left orbit and swelling of the eyelid. There was also marked proptosis. Clinical examination pointed to sarcoma as a possible diagnosis. The swelling was incised; it was found to be caused by suppuration of a somewhat unusual nature in that the pus was scanty and contained numerous small yellow granules. The pus was regarded as being clinically characteristic of actinomycosis. The subsequent history of the case is that a fistulous sinus formed and fresh pockets of pus were discovered which required further operation. After thorough opening and scraping of these, and ordinary surgical treatment, they healed, the proptosis disappeared, and the child was discharged. Potassium iodid had been given under the impression that the case was one of actinomycosis.

Examination of the pus failed to reveal the expected actinomycotic fungus, and this was reported to the surgeon. The result was received by him with some scepticism, and further investigation was urged. Cultural and experimental tests are still in progress. Butler and Welsh suggest that there is sufficient evidence to make it probable that the case described, and possibly others not recognized, represent conditions of botryomycosis occurring in man. They have seen a few cases in which the clinical features of the lesion, and the naked eye appearance of the pus were regarded as characteristic of actinomycosis and yet the most careful microscopic and cultural examination failed to reveal any streptothrix.

Dublin Journal of Medical Science

January

36 Physiology of the Pylorus. W. H. Thompson.
37 Trachoma. A. H. Benson.

Glasgow Medical Journal

January

38 Symptoms and Diagnosis of Duodenal Ulcer. A. E. Maylard.
39 *Acute Hemorrhagic Leucemia. W. K. Hunter.
40 Advances in Gynecology in Recent Years. J. M. M. Kerr.
41 *Rupture of Vessels of the Neck into the Pharynx in Scarlet Fever. J. H. Griffiths and D. F. Riddell.
42 Formation and Early Days of the St. Andrew's Ambulance Association. Sir G. T. Beatson.

39. Acute Hemorrhagic Leucemia.—The patient, a young woman, aged 22, dated her illness from a bleeding of the gums she had four weeks before Hunter saw her. A fortnight later there appeared blood in the urine, and this persisted. The temperature was 100 F.; pulse 120. The skin and mucous membranes were pale, and blood was exuding from the gums and clotting round the roots of the teeth; the breath had a most offensive odor. There were no purpuric spots in the skin, but a few bluish markings like slight bruising. The urine presented the appearance of blood-stained serum. There was no enlargement of the liver, spleen or lymphatic glands to be made out.

The red corpuscles numbered 2,680,000 per c.mm.; the white corpuscles 59,375 per c.mm.; and the hemoglobin registered 45 per cent. There was little poikilocytosis. There was a considerable proportion of nucleated red cells—about two to the hundred white cells. The vast majority of the white corpuscles were medium-sized mononuclear cells, with fairly well-stained nucleus, and the surrounding plasma less deeply stained. In a proportion of the cells this plasma (with Leishman's stain) had a rather leaden tint, while in others there were granules staining the same tint as the nucleus of the cell. In films stained with methylene blue only, these granules stained blue. No typical "large lymphocytes," i. e., cells with large pale nucleus and rim of darker stained plasma, were to be seen, and only an occasional neutrophil marrow cell was present. The patient lived eight days after this blood count, the whole duration of illness, so far as could be determined, being about five weeks.

41. Rupture of Vessels of Neck Into Pharynx in Scarlet Fever.—A boy, aged 9½ years, had a typical mild attack of scarlet fever, which ran a normal course with no complications till the twenty-third day of the disease when the temperature rose to 101.4 F., and the boy complained of pain in the right side of the neck. The next day the glands on the right side of the neck were enlarged and tender. This condition continued. On the twenty-eighth day the swelling in the throat presented the appearance of suppurative tonsillitis; a swelling could just be felt behind the right tonsil. The external swelling was excised; no pus. On the next day the swelling behind the tonsil was soft, and the wall broke down under slight pressure of the finger, the tip of which passed into a cavity about the size of a hazel-nut, and this was followed by a rush of dark-colored blood. The hemorrhage was profuse and uncontrollable, and the patient died in about a minute. A post-mortem examination was held. There was no ulceration of the fauces. Both tonsils were clean; right side of palate was edematous and right tonsil swollen. Behind the right tonsil was an irregular-shaped cavity, about the size of a hazel nut, the inner wall of which was broken down. This cavity was lined with laminated blood clot, about one-eighth of an inch thick, easily detachable, and forming a complete inner shell. Some loose blood clot was found inside. The internal jugular vein was connected with the outer wall of the cavity. Three large glands, about the size of a walnut each, were found between the right jaw and sternomastoid. The trachea was full of blood. All other organs appeared normal.

In the second case, rupture of the internal carotid occurred suddenly. The child was sitting propped up in bed taking some rice pudding, when he gave a sudden cough, which was followed by profuse arterial hemorrhage from the mouth, completely saturating the bedclothes. He died almost immediately. On dissection of the right side of the neck two enlarged glands, about half the size of a small walnut each, were found. These were just breaking down. The large vessels were dissected out as far as possible, and on the inner

side, at about the level of the angle of the jaw and just behind the pharyngeal wall, a small cavity, large enough to contain a small hazel nut, was found with some blood clot. The walls of this cavity were ulcerated, and at the upper part the internal carotid was found to be involved in the ulceration. A rupture of the wall of the artery was found. On the opposite side of the cavity a corresponding tear was found in the posterior pharyngeal wall. There was no evidence of ulceration internally in the pharynx, the mucous membrane of which was found to be intact, except at site of rupture. Both tonsils showed slight superficial ulceration, which seemed to be healing.

Annales de l'Institut Pasteur, Paris

December, XXIII, No. 12, pp. 937-1044

43 *Lack of Intestinal Flora in Bats. (Roussettes et microbes.) E. Metchnikoff and Others.
44 Histophysiologic Research on Aseptic Autolysis of the Liver. (Autolyse aseptique du foie.) L. Launoy.
45 Epidemic of Yellow Fever at Martinique. (Etude de l'épidémiologie amarile.) Simond, Aubert and Noc. Commenced in preceding number.

43. Digestion Without Intestinal Flora in Bats.—Metchnikoff and his assistants have made a special study of the large fruit-eating bat of the tropics, the connecting link between birds and mammals. It has no cecum and the large intestine is very short so that the food residue is rapidly expelled, as in birds. This animal shows that digestion can occur without the aid of microbes in the intestine. Digestion proceeds by the digestive juices alone. This bat expels its dejecta very rapidly, and thus mechanically sweeps out any microbes ingested, so that the intestine contains scarcely any. The facts observed with very young animals, chickens and tadpoles should not be regarded, Metchnikoff says, as contradictory, as in them the digestive power is still incompletely developed, and the aid of microbes may be of great importance for digestion in their case. The absence of intestinal flora in the bat explains the lack of aromatic substances in the excreta, such as indol, skatol and the phenols, and this finding confirms the assumption that these substances are not produced by the animal organism, but by the microorganisms inhabiting the intestines. He thinks that the same statement applies to urobilin, the bacterial origin of which is more generally accepted. Another point brought out in this research is that as the digestion in the bat is done exclusively by the digestive juices, these must also be responsible for the digestion of cellulose. It has not proved possible to isolate the ferments which perform this work, but the good digestion in the bat of fruit rich in cellulose shows that microbes are not necessary for the digestion of the latter.

Archives Générales de Chirurgie, Paris

December, III, No. 12, pp. 1211-1320

46 Anatomic Type of Fracture of the Calcaneum. A. Binet and Trenel.
47 Inflammation of Anterior Tubercle of the Tibia. (Apophysite tibiale.) D. Zesas.
48 Simultaneous Diverticulitis and Appendicitis. Mauclaire and Douay.

Archives Générales de Médecine, Paris

December, LXXXIX, No. 12, pp. 869-906

49 *Pulmonary Edema During Pregnancy and Parturition. (Oedème aigu du poumon dans l'état puerpéral.) L. Pouliot.
50 Crossed Cultivation of *Bacillus perfringens* and Bacillus of Acute Articular Rheumatism. G. Rosenthal and P. C. Wetzel.
51 Radioactive Mud in Treatment of Acute Exacerbations of Gonorrhea in Women. (Les boues radio-actives dans le traitement des poussées inflammatoires aigues, d'origine gonococcique chez la femme.) S. Fabre and P. Lutaud.

49. Edema of the Lungs in Pregnancy and the Puerperium.—Pouliot discusses the origin, means of prevention and treatment. He has found 10 cases on record in which the edema developed in the lung in consequence of some heart lesion, with only 3 survivals; 6 cases in which the edema was the result of the toxemia of pregnancy, with 3 survivals, and 12 cases in which the edema followed administration of pilocarpin given to relieve albuminuria or eclampsia. Six of the women in this group recovered. He tabulates the details of the various cases, and calls attention to the necessity for distinguishing between passive and active edema. The former is generally from a chronic tendency to edema, while the active form is due to congestion, vasodilatation of the arterioles and capillaries in the lungs. This vasodilatation may be a nervous vasomotor phenomenon of reflex origin or the result of the action of toxins on the nerve centers. Edema of the lungs is one of the gravest complications of parturition, both for mother and child. As the maternal blood suffers from lack of oxygen, it draws on the reserve oxygen in the blood of the fetus, so that, as a rule, the fetus is asphyxiated before the mother succumbs. In prevention he advises against marriage and pregnancy for girls with adherent pericardium, mitral lesion complicated with albuminuria, pulmonary tuberculosis or scoliosis, and, if pregnancy occurs, it should be supervised with extreme care to ward off retention of salt and arterial hypertension. With failing compensation, he warns against inducing abortion in case of any of the above complications. If labor has commenced, it must be borne in mind that this frequently gives the final stroke to an already overworked heart and thus starts the pulmonary edema, consequently all should be in readiness to hasten delivery with instrumental dilatation, version or forceps. Delivery and the first hours thereafter are the most critical from the standpoint of edema of the lungs. The possibility of edema should be borne in mind, and heart tonics given to women with pneumonia, influenza or rheumatism, restricting to the minimum the intoxication from the food, and especially reducing the intake of salt in those showing the least tendency to albuminuria. No harsh measures should be used, or injection of salt solution; if the latter is deemed necessary, it should be given only in fractioned doses and subcutaneously, not intravenously. Asphyxia is best combated by immediate venesection, withdrawing at least 500 gm. of blood. The danger from loss of so much blood when the woman has already lost a considerable amount is much less than the danger from the acute edema of the lung. After the venesection, subcutaneous injection of apomorphin may aid in promoting expectoration of the fluid while reducing the pressure in the circulation through the lungs. Inhalation of amyl nitrite in this condition has proved disappointing. The heart should be sustained in the meanwhile with the usual tonics; camphorated oil is not only a vigorous tonic for the heart, but it has a sedative action on the respiratory spasm, while it is comparatively harmless. He advises injecting up to 10 c.c. of a 10 per cent. solution. Inhalation of oxygen is also a useful adjuvant. One case at least is on record in which Cesarean section twenty minutes after death delivered a viable child.

Presse Médicale, Paris

January 8, XVIII, No. 3, pp. 17-24

52 Cytology of the Urethra in Chronic Urethritis. (Diagnostic des séquelles inflammatoires des urétrites chroniques.) J. Baur.
53 Phototherapy and Radiotherapy of Acne and Acneiform Lesions. H. Bordier.
54 Fracture of Terminal Phalanx of Finger. (Désinsertion phalangettienne du tendon extenseur.) R. Bonneau.

January 12, No. 4, pp. 25-32

55 Ultraviolet Rays. (La lumière ultra-violette.) A. Trollier. (Les propriétés physiques des rayons ultra-violets.) Matout. (Les rayons ultra-violets et leurs applications à la stérilisation.) V. Henri and G. Stodel.
56 Primary Tumor of the Liver. (L'hépatome: tumeur primitive du foie.) L. Rénon, E. Géraudel and R. Monnier-Vinard.

January 15, No. 5, pp. 33-40

57 Present Status of Bronchoesophagoscopy. P. Sebileau and F. Lemaitre.
58 Adherent Inguinal Hernia of the Cecum. G. Lardennois and J. Okinczyc.

Semaine Médicale, Paris

January 19, XXX, No. 3, pp. 25-36

59 Phenomena of Reaction to Softening of the Brain, Aseptic or Inflammatory. (Les phénomènes réactionnels du ramollissement cérébral aseptique, leurs caractères différentiels d'avec l'encéphalite compliquée de ramollissement.) J. Lhermitte and H. Schaeffer.

Beiträge zur Klinik der Tuberkulose, Würzburg

XIV, No. 4, pp. 359-476. Last indexed Dec. 25, p. 2180.

60 *Tuberculin Treatment of Pulmonary Tuberculosis. G. Schröder.
61 Experimental Attempts to Immobilize the Lung by Plastic Operations on the Thorax. (Versuche zur Lungenkollapstherapie durch Thorakoplastik.) R. Eden.
62 Differential Diagnosis Between Extremely Large Cavities in the Lung and Pneumothorax. L. Brauer and W. A. Gekler.
63 Experimental Research on Origin of Pulmonary Emphysema. (Entstehung des Lungenemphysems.) H. Schall.
64 *Technic of and Dangers to Avoid in Surgical Pneumothorax to Immobilize the Lung. (Erfahrungen und Ueberlegungen zur Lungenkollapstherapie. II.) L. Brauer and L. Spengler. First part in Vol. XII, No. 1.

60. Improved Technic in Tuberculin Treatment.—This article was read at the annual meeting of the medical directors of the German sanatoriums for lung disease last October. Schröder reviews his experience with 25 cases in which tuberculin treatment had been systematically given by other physicians according to the generally approved technic, and the patients had been discharged as practically cured. They came to Schröder's sanatorium, however, not long after with severe recurrence of symptoms and acute spread of the tuberculous process. In each case the tuberculin had been given with gradually increasing doses until it was tolerated without any reaction. But not long after the course of treatment a tuberculous process developed in the larynx in 4 cases, in the intestines in 2, once each in the kidney, meninges, testicles and epididymis, middle ear, knee, hip and tonsil, and in 8 cases there was serious breaking down of lung tissue and in 6 the onset of galloping phthisis. He suggests the possibility that the tuberculin may have rendered more active already existing but occult foci. In some of the cases the process was finally arrested, but in the majority the disease progressed to a speedily fatal termination. This group of cases demonstrates, he affirms, that tuberculin treatment continued until it induces no further reaction, that is, until the patient is "toxin-fast," does not protect against the spread of the tuberculosis and may even favor it. He insists that the effort to render the organism artificially toxin-proof is based on a mistaken conception of what is needed, as he explains in detail. The true principle of effectual tuberculin treatment is with the most minute doses, Wright's and others' research having demonstrated that even the smallest doses of a specific vaccine seem to be able to stimulate the production of antibodies. Autoreinfection from the patient's own focus during physical exercise may answer this purpose to a certain extent. On this basis Schröder has applied tuberculin in treatment of 60 tuberculous patients in the last few years, using in 45 cases "bacillus emulsion" and in 15 "Perlsucht old tuberculin." The doses were from 0.00005 mg. to 5-8/10000 mg. of the former and from 1/1000 to 1-2/100 mg. of the latter, allowing 10 or 14 days between each injection and reducing the size of the dose if anything indicating a general or local reaction was detected. In this group of patients 12 were in the first, 30 in the second and 18 in the third stage of tuberculosis. Tubercle bacilli vanished from the sputum in 21 of the 42 patients with open lesions. The results on the whole, he declares are better than have been realized elsewhere in Germany with the same class of patients. In 50 cases the patients had fever and normal temperature was permanently restored in 41. He claims that this method of treating tuberculosis with the most minute doses of a specific antigen, relinquishing all attempts to render the patients non-sensitive to the toxin, is a great improvement over the usual methods of administration and, while perfectly harmless, is proving a most valuable adjuvant to hygienic-dietetic measures by stimulating the production of antibodies in the most harmless way. A local reaction in the focus was frequently detected, which he assumed to be an inflammatory reaction, and he always kept the patients entirely quiet thereafter for a day or so to prevent further injury. To attempt to magnify this local reaction by physical exercise or work is both useless and dangerous, he affirms. The aim of administration of these minute doses of the specific antigen is to promote the cheesy degeneration, softening and throwing off of morbid products while refraining from favoring the spread of the disease to the surrounding sound tissue or driving out the tubercle bacilli and their toxins to flood the organism. Under all conditions, he adds, this treatment with the specific antigen requires that the patient should be kept under permanent clinical control. Ambulant treatment he denounces as dangerous.

64. Surgical Pneumothorax in Treatment of Pulmonary Tuberculosis.—This extensive article is a discussion of the technic, the dangers and the results of immobilization of the lung as practiced by Brauer and Spengler. They also review 5 fatalities which have occurred in connection with surgical pneumothorax, and show the blunders in technic which permitted them. Air embolism is the chief danger, and an incision is necessary for the first insufflation; ignorance as to where the tip of the needle is going is too hazardous. Some of the cases of air embolism from injury by this means have been reported as reflex spasm or eclampsia of the pleura, a conception without analogy under other conditions.

Berliner klinische Wochenschrift, Berlin

January 3, XLVII, No. 1, pp. 1-44

65 *Points in Physiology of the Brain Learned from Operative Experience. F. Krause.
66 *Surgery of Blood-Vessels. (Gefässchirurgie.) S. Hadda.
67 Cesarean Section for Placenta Prævia. (Kaiserschnitt bei Placenta praevia.) B. Krönig.
68 Milk Albumin in Infant Feeding. (Milcheiweissfrage in der Säuglingsernährung.) A. Bickel and H. Roeder.
69 Normal Decline in Weight After Birth. (Die "physiologische Gewichtsabnahme" der Neugeborenen.) J. Hirsch.
70 Seroreaction with Echinococcus Cysts. H. Lippmann.
71 Atypical Reaction to Roentgen-Ray Exposures. (Atypische und weniger bekannte Folgeerscheinungen nach Röntgenbestrahlung.) A. Zehden.
72 Angina and Chronic Recurring Parotitis. W. Lublinski.

65. Physiologic Data in Regard to the Brain Learned from Operative Experience.—Krause has had success in a number of cases of operative treatment of epilepsy; but he never excises more than an area of 24 x 30 mm., 5 or 8 mm. thick. The disturbances after the excision are startling, but they usually subside in a few days or weeks. He describes them in detail as also the motor disturbances in speech which he has observed in several cases after excision of the cortex and which his experience has more definitely localized. The surgeon undertaking operations on the brain should master the technic of electric stimulation of the cortex, although never forgetting that he is working not for physiologic but for therapeutic purposes. The visual disturbances are further described; in one case a tumor in the occipital lobe was diagnosed mainly by the hemianopsia. After the operation in one case there were peculiar visual hallucinations for a week, but finally even the hemianopsia subsided and the patient has been well during nearly four years since. In a case of sarcoma in the vicinity of the optic nerve there was no hemianopsia, but this developed afterward, probably from the tamponing necessary, and it has persisted to date. The remarkable rise in temperature and pulse after operations on the brain was observed in several cases, but with no other signs of fever in most cases; in one the temperature continued for three months. In one case a chill and vomiting accompanied the recurring high temperature during three months, but the patient is now in good health after an interval of three years.

66. Suture of Vessels.—Hadda describes the technic with which he has been able to suture the femoral artery and vein to induce anastomosis between them without checking the flow of blood at any time. His experiments were made on dogs, and 7 of the 11 operations were entirely successful. His technic excludes seizing the vessels with forceps; he uses an instrument consisting of two fine knife-blades, tapering to a point, with which the vessels are cut after they have been sutured, not before. He says it is interesting to see the arterial blood pour at once into the vein without interruption at any time of its flow.

Deutsche medizinische Wochenschrift, Berlin

January 13, XXXVI, No. 2, pp. 57-104

73 *Chronic Cystic Cerebral Meningitis. (Zur Meningitis chronica serosa circumscripta des Gehirns.) H. Oppenheim and M. Borchardt.
74 The Cammidge Reaction. O. Hess.
75 Actions of Combinations of Hypnotics. (Wirkung von Narcotica-Kombinationen.) E. Bürgi. Commenced in No. 1.
76 Treatment of Meningococcus Carriers. (Zur Behandlung der Meningokokkenträger.) H. Bethge.
77 Serous Expectoration. P. Hampeln.
78 Paratyphoid Bacilli and Meat Poisoning. (Paratyphusbazillen und Fleischvergiftungen.) E. Hübener.

73. Circumscribed Chronic Serous Cerebral Meningitis.—Oppenheim reports a case which demonstrates that a circumscribed serous meningitis may develop in the posterior cranial fossa, consecutive to various causes, the symptoms of which resemble those of a brain tumor in nearly every respect. The prognosis, however, is good with early surgical interference. When signs of meningeal irritation are particularly pronounced in dubious cases and the syndrome shows marked exacerbations with long remissions, the possibility of serous meningitis should be borne in mind. Under certain conditions a pulsating vascular murmur may be heard, similar to that

of aneurism of the basal arteries. If the disturbances do not subside under iodin and mercury, operative intervention should be considered. This proved entirely successful in a case reported in detail, except that the vision had been lost in one eye and was much impaired in the other before the parents consented to operation. The danger to vision should hasten the decision in such cases. Lumbar puncture alone seemed to aggravate the condition, although only 2 c.c. of fluid was withdrawn. Borchardt completes the report by adding the surgical details. The patient was a girl of 9.

Fortschritte der Medizin, Leipsic

January, XXVIII, No. 1, pp. 1-32

79 Principles of Immunization Against Bacterial Toxins. H. Much.
80 Advantages of Physical Measures in Treatment of Heart Disease. E. Plate.

Medizinische Klinik, Berlin

January 9, VI, No. 2, pp. 35-84

81 *Cystoscopic Diagnosis of Tuberculosis of the Kidney in Boys. (Zystoskopische Diagnostik der Nierentuberkulose beim Knaben.) E. Portner.
82 History, Anatomy and Technic of "Spinal Anesthesia." (Rückenmarksanästhesie.) H. Sellheim.
83 *Indications and Contraindications for Rectal Injections and Enemas. (Dickdarmeinläufe und Klistiere.) I. Boas.
84 Osmotic Concentration of Mixtures of Milk for Infant Feeding and Its Practical Importance. (Die osmotische Konzentration der Säuglingsmilchmischungen und ihre praktische Bedeutung.) Engelmann and Kock.
85 Urobilinuria. Huber.
86 Thirty-five Cases of Tonsillitis with Sepsis. L. Liebl.
87 The Permeability of the Meninges. V. Kafka.

81. **Cystoscopic Diagnosis of Renal Tuberculosis in Boys.**—Portner remarks that cystoscopy in girls, even only a year old, is no more difficult than in adults, but that in boys the small caliber of the urethra interferes with the introduction of the cystoscope. The possibility of renal tuberculosis should always be borne in mind in a case presenting the three symptoms of abnormally frequent micturition, pain in the bladder and pyuria; and the kidney functioning should always be tested to determine the condition of the other kidney. Inoculation of animals should be the routine practice in every case of pyuria which does not show a prompt turn for the better soon, especially in children. Every tuberculous process in the urinary organs has one stage in which it is strictly localized to the organ in question, and it is the practitioner's duty to diagnose it while it is in this surgically curable stage. In a case Portner describes at length the above triad of symptoms was assumed to indicate bladder stone, but a suprapubic incision showed the bladder empty, and 4 guinea-pigs injected with the urine all developed tuberculosis. Such cases confirm the importance of prompt cystoscopy; it is possible to use a small caliber cystoscope on a boy 2 years old and up, and to catheterize the ureter from the age of 8 up. General anesthesia is indispensable, and this is the most difficult point of the technic, as superficial anesthesia is inadequate. The bladder reflex persists longer than the corneal, and unless it is fully stilled the bladder will be intolerant of the fluid introduced and will expel it or may bleed. No attempt should be made to introduce the cystoscope until the pupils are contracted and cease to react. The bladder mucosa was found normal in the case described, but there was a possibility that the pus cells observed came from both kidneys. Functional tests of the kidney requiring catheterizing of the ureters or segregation of the urine could not be attempted in this small boy, but the indigocarmin test—chromocystoscopy—was applied at once, the child being still under the influence of the anesthetic. An injection was made in the buttocks of 20 c.c. of a 4 per cent. solution of the stain. In normal conditions the urine is seen to become blue in from 8 to 10 minutes, but in this case 12 minutes elapsed before the blue urine spurted from the right ureter, and not until after 21 minutes did the urine from the left ureter show a tinge of blue gradually deepening in the next 3 minutes—a difference of 9 minutes to the discredit of the left kidney. The absence of cachexia in this case indicated that the process was not bilateral. The slight delay with the urine from the right kidney suggested caution, however, so that the parents' dread of an operation turned the scale and merely a course of tuberculin treatment was instituted. This was the more justified, as the lack of tuberculous processes in the bladder rendered ascending infection of the sound kidney improbable. In another case prompt nephrectomy put an end to the distressing pains and tenesmus, but the second kidney was evidently involved in the process, as surmised from the fact that neither of the ureters passed tinted urine after injection of indigocarmin. The involvement of the second kidney must have been of recent date, as the mouth of the right ureter seemed to be normal; the child's general health was also not much impaired, and the conditions in this case promise a favorable outcome.

Local treatment of the bladder with solution of bichlorid of mercury is useful after nephrectomy, but it is of no use, Portner says, when both kidneys are tuberculous, and it only torments the patients unnecessarily. As a rule, tuberculosis of the urinary apparatus seems to be more malignant in children than in adults, but Portner thinks that this impression is perhaps only due to the fact that we have not learned to differentiate it early enough. It is not so long ago that the same pessimism prevailed in regard to renal tuberculosis in the adult.

(An illustrated description of the method of chromocystoscopy was given in THE JOURNAL, Jan. 2, 1904, page 69. See also page 2005, Dec. 5, 1908.)

83. **Indications and Contraindications for Enemas.**—Boas discusses the change in opinion in late years in regard to the efficacy of medicinal injections into the intestines, his view being that astringent and other medicated enemas do more harm than good and are liable to induce inflammation and aggravate the existing. Even plain water enemas are liable to induce or aggravate mucomembranous enteritis, while all disturbances may cease when the constipation or the diarrhea is cured by dietetic measures. In cases of severe constipation, continuous irrigation with soapy water and a two-way tube, with the patient on the side or in the knee-elbow position, continuing with several quarts or until the water comes away free from feces, is the most effectual measure for severe acute or chronic coprostasis, far surpassing, Boas asserts, injections of oil, although he sometimes adds a few hundred grams of olive oil to the water. Under other conditions enemas are of little value unless the lesion is accessible in the rectum, in which case benefit may be derived from protecting powders, such as bismuth. Except with tuberculous or syphilitic ulcerations he has always found that the process started to heal when treated with a 5 per cent. suspension of bismuth or the latter insufflated dry.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

January, XXXI, No. 1, pp. 1-150

88 Arguments in Favor of Classic Technic for Cesarean Section. (Ein Wort für den klassischen Kaiserschnitt.) F. Schauta.
89 *Streptococcus Infection and Leucocytosis. W. Zangemeister.
90 Malformation of the Limbs in New-Born Infants. (Extremitätenmissbildungen bei Neugeborenen.) L. Mayer.
91 Muscle Plastic Restoration of Floor of Pelvis in Treatment of Genital Prolapse. (Myoplastische Bildung des Beckenbodens mit Hülfe des M. levator ani und des M. glutaeus maximus.) J. Tandler and J. Halban.
92 Laparotomy for Incarcerated Retroflexion of the Gravid Uterus. E. Puppel.
93 *Yeast in Treatment of Leucorrhea. (Neuere Versuche über die Hefebehandlung des weiblichen Fluors.) O. Abraham.
94 Outcome in Eighty Cases of Uterine Cancer. (Karzinomstatistik der Kgl. Universitätsfrauenklinik zu Halle a. S.) J. Veit.

89. **Streptococcus Infection and Tuberculosis.**—Zangemeister's experimental research and clinical experience have shown that certain features of the blood count with streptococcus infection may prove important for diagnosis and prognosis, as he explains in detail.

93. **Yeast in Treatment of Leucorrhea.**—Abraham announced in 1902 that living yeast had a destructive action on bacteria, and most of all on the gonococcus, killing the latter in 6 hours' contact, streptococci in 32 and staphylococci in 40. Killed yeast cells do not have this bactericidal action unless mixed with sugar. The bactericidal action is not connected with the living cells or fermentation products, as it continues after the cells have been killed, as in compressed and dried yeast, if mixed with sugar, but not without this admixture. He applied the facts thus learned to treatment of leucorrhea, and his experience in this line, he states, has confirmed the efficacy of yeast in treatment of gonorrheal and non-gonorrheal inflammation, erosions and similar lesions, both vaginal

and uterine. For the last year or so he has mixed the yeast with bolus alba as the most convenient vehicle. This ensures also the advantages of the bolus. He adds to the mixture also a little sugar and alkali, the latter in the form of magnesium sulphate, sodium phosphate and carbonate and potassium carbonate. The powder formed by this combination is durable; he applies it by insufflation or introduces it in a gelatin capsule. The bolus alone cures temporarily, he says, but does not remove the cause, so the trouble returns afterward, but the above combination seems to have a prompt and thorough action, not only drying up the source of the secretion, but destroying the gonococci and other germs. Recent gonorrheal colpitis subsides rapidly under its influence; erosions heal more slowly. Lesions in the uterus also heal as the sources of irritation and of constant infection in the vagina are cured. It is necessary, however, to mop out the cervix in case of much inflammation before applying the yeast mixture in order to ensure good results. All but 14 per cent. of his patients in this class had the cervix inflammation subside; in nearly half of the cases of failure the inflammation was kept up by some lesion in the adnexa.

Münchener medizinische Wochenschrift

January 11, LVII, No. 2, pp. 57-112

95 *Acute Poliomyelitis in Monkeys, and the Nature of Its Causal Agent. (Ueber experimentell erzeugte akute Poliomyelitis bei Affen und die Natur ihres Erregers.) S. Flexner and P. A. Lewis (New York).

96 Specific Changes in Drop-Forming Property: Stalagmometry. (Die spezifische Melostagmin-reaktion. Eine physikalisch-chemische Immunitätsreaktion.) M. Ascoli.

97 Formation of Fat Acids in Infants' Intestines. (Das Verhalten der Fettsäurebildung im Darminhalt des Säuglings.) A. F. Hecht.

98 Behavior of Liver in Chronic Pericarditis. O. Hess.

99 Phagocytosis and the Arneth Blood Formulas. (Phagozytose und Arnethsches Blutbild.) W. Busse.

100 *Liability to Genital Prolapse in Elderly Primiparæ. (Der Genitalprolaps eine Folge der späten Erstgeburt.) M. Fetzer.

101 *Contusion of the Pancreas. (Ueber subkutane Pankreasverletzungen.) N. Guleke.

102 Seroreaction in Syphilis as Tested at Strasburg Clinic. Hügel and Ruete.

103 *Hygiene of the Mouth and Pulmonary Tuberculosis. A. Moeller.

104 Brandy Intoxication and Test for Fusel Oil in Liquors. (Branntweinvergiftungen zugleich ein Verfahren zum qualitativen Nachweis von Amylalkohol [Fuselöl] in spirituösen Lösungen.) H. Holländer.

105 Bolus Alba in Therapeutics. (Zur Bolusbehandlung.) M. Nassauer.

95. This article appeared in THE JOURNAL, Dec. 18, 1909, p. 2095.

100. **Genital Prolapse as a Consequence of Advanced Age at First Labor.**—Fetzer gives a number of diagrams comparing the age at the first childbirth in connection with development of genital prolapse among the patients at the Tübingen gynecologic clinic. Women who bear their first child before the age of 20 very seldom have genital prolapse later; the tendency to it increases with every year of the woman's age at the time of her first pregnancy. The number of labors, Fetzer says, does not seem to influence the tendency to genital prolapse, only the age at the first pregnancy.

101. **Contusion of the Pancreas.**—Guleke reports 4 cases, one with autopsy. Operative intervention was necessary in all but the last case, and he reviews the indications for it. Three of the patients recovered; a tumor developed in the epigastrium in 2 cases, evidently an effusion in the lesser sac of the peritoneum.

103. **Care of the Mouth and Tuberculosis.**—Moeller urges extra care of the teeth and mouth by the tuberculous, not only to clear out nesting-places for bacilli, but also to insure proper mastication, which is especially necessary for them to ensure getting the greatest benefit from the nourishment taken.

Virchows Archiv, Berlin

January, CXCIX, No. 1, pp. 1-192

106 Research on Stasis in Pancreas of Living Rabbits. (Beiträge zur Lehre von der Stase nach Versuchen am Pankreas des lebenden Kaninchens.) M. Natus.

107 Cancer in Dogs. (Ueber den vollwertigen Organbau eines Talgdrüsenadenoms und eines Analdrüsenkarzinoms beim Hund.) A. Jaeger. (Zur Metaplasiefrage und den organoiden Entwicklungsvorgängen der Tumorengenese, dargelegt an den Mammablastomen des Hundes.) Id.

108 Acquired Syphilis of the Small Intestine. (Ueber erworbene Dünndarm-Syphilis.) E. Fraenkel.

109 Endocardium Tumors. (Ueber sogenannte Endokardtumoren und ihre Entstehung.) H. Stahr.

Wiener klinische Wochenschrift, Vienna

January 13, XXIII, No. 2, pp. 41-82

110 Simultaneous Normal and Extrauterine Pregnancy. (Zur Kenntnis der gleichzeitig extra- und intrauterinen Gravidität.) Ehrendorfer.

111 Unilateral Exclusion of the Pylorus. (Zur unilateralen Pylorusausschaltung.) A. v. Eiselsberg.

112 Plastic Operation on the Cheek with Flap from Shoulder. (Wangenplastik mit am Sternalrand gestieltem, gegen die Schulter verlaufendem Brusthautlappen.) V. v. Hacker.

113 *Gastroenterostomy or Resection for Gastric Ulcer? J. Hochenegg.

114 *Three Cases of Splenectomy. W. Otto.

115 *Calculus Anuria. (Bemerkungen zu einem Falle von kalkulöser Anurie.) A. Fraenkel.

113. **Gastroenterostomy or Resection for Gastric Ulcer?**—Hochenegg remarks that gastroenterostomy for ulcer has become the most frequent operation he has to perform now, with the exception of herniotomies. The results are uniformly good with the routine technic employed. In his private practice all the patients were freed at one stroke from their ulcer disturbances and have been in good health for years, including 5 cases in which the ulcer was not in the pylorus region. On the other hand, in the one case in which he gave the preference to resection—a callous ulcer with adhesions to the pancreas—a small abscess was opened, and fatal peritonitis followed. Gastroenterostomy protects better than resection, he thinks, against recurring ulceration, while it is a far less serious operation than resection. Suspicion of cancer, of course, justifies the latter, but he does not approve of Payr's suggestion that a family history of cancer should turn the scale in favor of resection when gastroenterostomy otherwise seems indicated.

114. **Splenectomy.**—In one of the 3 cases reported by Otto the young woman married after splenectomy in 1887, and has borne 9 children since, and is now robust and without a trace of anemia. The spleen was removed on account of being six times the normal size; the patient was extremely anemic and had had three febrile attacks. In another case the patient presented the symptoms of far-advanced splenomegaly with cirrhosis of the liver, the syndrome to which Banti called attention in 1894. The patient succumbed soon after the splenectomy. In a fourth, recent case, a hemophiliac taint warns against surgical intervention, and he is trying to cure the patient with arsenic. A fifth patient with the same disease is soon to be splenectomized.

115. **Reflex Anuria from Lithiasis.**—Fraenkel reports the case of a previously healthy man of 39 awakened at night by pain in the left lower abdomen. He voided urine as usual the next morning, but after this 8 days passed with complete anuria, no desires to urinate, no pain and not much disturbance in general health. The bladder was empty, the abdomen nowhere tender, the secretion of urine having evidently ceased for the time being. An incision over the left kidney revealed this organ much enlarged, suggesting that the other kidney had long been totally functionless, which proved to be the case. The trouble was evidently a reflex anuria from the irritation of calculi found in the hilus; others were expelled later from the ureter. The capsule was enormously distended, but when opened no urine was found in the hilus. Normal conditions in the circulation and epithelium were gradually restored, and the secretion of urine proceeded normally thereafter. An interesting feature of the case was the lack of general disturbances during the 8 days of total anuria, suggesting that the retention of waste matters is not after all the real source of the disturbances observed during uremia. In this case measures to promote diaphoresis and to keep the bowels open during the week of anuria warded off evil consequences from the retention. The danger is when the kidney tissue becomes seriously impaired by the factors primarily responsible for the anuria—this injures the secretory apparatus beyond repair, and operative intervention should never be delayed until this danger stage is reached.

Zeitschrift für Geburtshülfe und Gynäkologie, Stuttgart

LXV, No. 3, pp. 569-786. Last indexed Jan. 15, p. 247

116 *Stretching of Perineum During Delivery. (Untersuchungen über den Modus der Dammdehnung in der Geburt.) H. Kilster.

117 *Oleic Acid Probably Not Responsible for Eclampsia Syndrome. (Ueber Oelsäurewirkungen als Ursache der Eclampsia gravidarum.) O. Polano.

118 A Polypous Cystoma on Posterior Surface of Uterus and Other Rare Findings in Internal Genitals. M. Bolaffio.
119 Male Pseudohermaphrodite. A. Heyn.
120 Axial Torsion of Uterus from Myoma in Ligament. (Ungewöhnliche Entstehung einer Hämatocervix.) R. T. Jaschke.

116. **Stretching of the Perineum During Delivery.**—Küster makes a cross of seven indelible dots on the perineum of lying-in patients to study the mode of distention of the parts during delivery, as the dots separate during the stretching. The fold of skin and vaginal tissue pushed before it by the head extends for 3 or 4 cm. beyond the musculature beneath so that an incision can be made in the middle line to this depth, in case the perineum does not yield, without fear of cutting into the muscles below. The findings with the dots show that the perineum does not stretch to such an extent as stated in the text-books. An incision in the median line to a depth of 1.5 or 2 cm. is generally sufficient, as this permits a yielding of 3 or 4 cm. According as the dots show that the stretching is mostly transverse or axial, the incision can be made to correspond. In some cases the vaginal wall is pushed along, so that as the parts relax after delivery it is found that the incision, 2 cm. long, is exclusively in vaginal tissue, the frenulum and skin of the perineum being intact. The dots aid in suturing the wound or laceration afterward, allowing more accurate coaptation. He makes a dot at the frenulum, at the point of junction of the mucosa of anus and rectum, at a point midway between these 2 dots, thus in the center of the perineum, and 2 other dots, each 1 cm. to right or left from the central dot, with 2 others 1 cm. beyond, this row being at right angles to the median row.

117. **Oleic Acid Not Responsible for Eclampsia.**—Polano's research has demonstrated that oleic acid is found in normal as well as in eclamptic placentas and not in any larger proportion in the latter.

Zeitschrift für klinische Medizin, Berlin

LXIX, Nos. 3-4, pp. 205-392. Last indexed Jan. 29, p. 421

121 *Early Physical Diagnosis of Pulmonary Tuberculosis. (Physikalische Frühdiagnose der Lungenschwindsucht.) A. Goldscheider.
122 Influence of Position of Heart on the Electrocardiogram. (Einfluss der Herzlage auf die Form des Elektrokardiogrammes.) H. Grau.
123 *Clinical and Pathogenic Research on Levulosuria in Diabetes Mellitus. H. Koenigsfeld.
124 Research on Metabolism and Stools in Chronic Pancreatitis. R. Ehrmann.
125 *Hypoglycemia in Addison's Disease and in Dogs After Removal of Suprarenals. (Hypoglykämie bei Morbus Addisonii sowie bei nebennierenlosen Hunden.) O. Porges.
126 Primary Carcinoma in Hepatic Duct and at Junction of the Three Large Bile Ducts. D. G. Zesas.
127 *Research on Exophthalmic Goiter. (Zur Lehre vom Morbus Basedowii.) R. Hoffmann.

121. **Physical Diagnosis of Incipient Pulmonary Tuberculosis.**—Goldscheider discusses percussion in general, especially with his technic of extremely delicate percussion, and interpretation of the findings, comparing them with Roentgen findings and the later course of the cases. Thirty-two pages are devoted to the tabulated details of 88 cases, accompanied by a number of plates with pictorial comparison of the findings from percussion and screen examination. His aim is to demonstrate beyond question the advantages of his method of delicate percussion which, he insists, reveals apical lesions that escape recognition by any other means. Especially instructive is his comparison of the findings with delicate percussion with those of ordinary finger-finger percussion. In only one of the total number were the findings contradictory, and this case is still a mystery. In 20 cases skiascopy indicated a right lesion, in 63 bilateral lesions, while his delicate percussion indicated a right lesion in 15 and bilateral in 65, but ordinary percussion revealed bilateral lesions in only one of the cases. Auscultation findings differentiate active processes from residual changes. After first percussing as usual, he reduces the stroke to the lightest possible, comparing symmetrical points, generally commencing at the third intercostal space and working upward, or in the back near the spine at the fourth or fifth dorsal vertebra, gradually increasing the force of percussion. The room, of course, must be absolutely quiet. This delicate percussion will reveal minimal dulness, the signs of which may vanish if the force of the stroke is increased. The monograph fills nearly 80 pages and is the outcome of years of special study.

123. **Levulosuria with Diabetes.**—Koenigsfeld warns that levulosuria may be the result solely of excessive alkalinity of the urine after ingestion of unusual amounts of alkaline substances, the dextrose in the urine then becoming converted into levulose. In this "urinogenous levulosuria" there is no reduction of the power of the organism to assimilate levulose. Levulosuria may also be observed, with reduced gastric acidity and increased intestinal alkalinity. Ingestion of alkaline substances enhances this tendency to levulosuria, especially courses of alkaline mineral waters. When the liver cells are hampered in their function of transforming levulose into glycogen the capacity for assimilating levulose is correspondingly reduced. This sugar intoxication of the liver cells may be observed in chronic mild diabetes—the liver cells having long felt the effect of a weak sugar solution—and with recent severe diabetes, the liver cells feeling the effect of a strong solution of sugar. The practical points emphasized are that the polarization method is not reliable for quantitative determination of the sugars in the urine when the latter is alkaline; also that during a course of mineral waters the amount of levulose should be determined beforehand and quantitative fermentation be accepted as the more reliable test. Tests for the sugars in the urine vary in their results when the patient is or is not taking an alkaline mineral water. This explains why patients seem to eliminate less sugar during a course of mineral waters but return to the former proportions after finishing the course. Besides calling attention to the inverting of sugar in alkaline solutions, Koenigsfeld reviews the literature on the subject of levulosuria, citing 103 articles.

125. **Abnormally Small Proportion of Sugar in the Blood in Pancreatic Disease.**—Porges declares that the deficiency of sugar in the blood in Addison's disease and in dogs after removal of the suprarenals must be regarded as an important factor in the syndrome and a significant symptom. It is a temptation to regard this deficiency of sugar in the blood as the explanation of the muscular weakness, but his few therapeutic experiments with administration of sugar did not give positive results in ergograph tests. Intravenous injection of sugar in dogs after removal of the suprarenals seemed to render them more lively, but this impression is scarcely enough to base scientific conclusions on. At the same time, the research reported seems to demonstrate some connection between the proportion of sugar in the blood and the functioning of the suprarenals. It is possible, he thinks, that Addison's disease may be due not only to injury of the suprarenal tissue itself but also to lesions of the nervous apparatus governing its functioning.

127. **Treatment of Exophthalmic Goiter.**—Hoffmann's article is preliminary to another in which he is to report the influencing of exophthalmic goiter in certain cases by cauterization of the nose. He here discusses the etiology of the disease and especially its origin in and outside of the thyroid. It may be of central origin from permanent excitation or depression of the vasomotor center; in this case the disease may be cured by a sudden shock as from cauterization of the nose, hypnosis or autosuggestion, but it fails to respond favorably to surgical interference as the central cause still persists and continues its injurious action on the part of the thyroid still left. Possibly in these cases the goiter is only coordinated with the other symptoms of the disease, although the morbid thyroid secretion may secondarily aggravate the symptoms. The essential cause may be in the thyroid itself, in functional disturbances in the other glands with an internal secretion or in the central nervous system. The new data constantly being learned in regard to the correlation between the glands with an internal secretion are opening a wondrous field for research and practical therapeutics by the concerted work of physiologists, pathologists and general practitioners. He expatiates on the analogy between the thyroid and the suprarenals, and their antagonistic action, asserting that exophthalmic goiter is evidently the result of excessive thyroid functioning plus insufficient functioning of the suprarenals, while myxedema is just the reverse—thyroid insufficiency plus excessive suprarenal functioning. Myxedema is thus an epinephrin intoxication. His experiments on the frog eye

confirmed this assumption, the serum of thyroidectomized sheep and of myxedema patients dilating the pupil while normal serum shows no such influence. He suggests that trial of a suprarenal extract is justified in treatment of exophthalmic goiter. The measures liable to prove useful, corresponding to the special origin of the trouble, are resection of the thyroid, ligation of the artery, attempts to neutralize the thyroid secretion by the antagonistic suprarenal extract, and means to influence the vasomotor center by some sudden shock, possibly by cauterization of the nose. Hoffmann is assistant at Neumayer's clinic at Munich for nose and throat diseases, and he states that before attempting an operation in exophthalmic goiter, a tentative course of thyroid treatment should be instituted. If well tolerated or if conditions improve under it, he advises postponing the operative intervention.

Gazzetta degli Ospedali e delle Cliniche, Milan

January 6, XXXI, No. 3, pp. 25-32

128 Lymphangitis of the Scrotum in New-Born Infants. P. Lilla.

January 13, No. 6, pp. 57-64

129 Paratyphoid Infection. A. Connio.

Policlinico, Rome

January 16, XVII, No. 3, pp. 67-98

130 *Quinin Prophylaxis of Malaria. (La bonifica umana nella lotta antimalarica.) U. Gabbi.

130. **Quinin Prophylaxis of Malaria.**—Gabbi compares the number of cases of malaria last year with those in previous years in certain localities in which malaria is endemic and in which irrigating canals, ponds, etc., render the extermination of the anopheles practically impossible, and where systematic quinin treatment of the malarial inhabitants and preventive quinin administration have resulted in a marked reduction in the number of cases in these worst hotbeds of malaria with no other prophylaxis than the quinin. He remarks that it is a difficult matter to convince the peasants of the advantages of taking quinin when they are not sick, but experience is repeatedly demonstrating that the quinin prophylaxis must be kept up like mercurial treatment of syphilis.

Hospitalstidende, Copenhagen

November 24, LII, No. 47, pp. 1513-1552

131 Improved Technic for Detection of Tubercle Bacilli in Sputum and Urine. (En ny Metode til Paavisning af TB. i Sputum og Urinen.) P. Bogason.

December 1, No. 48, pp. 1553-1592

132 *Simplified Technic for Differential Blood Count. (En ny Leukocyttællingsteknik.) V. Ellermann and A. Erlandsen.

133 Congenital Dislocation of the Knee in Twins. (Luxatio congenitalis genus hos et Tvillingpar.) F. Bentzen. Commenced in No. 47.

December 8, No. 49, pp. 1593-1624

134 Unexpected Frequency of Positive Wassermann Reaction in Cardiac and Vascular Disease. (Wassermann-Reaktionens Betydning ved Hjerte- og Karsygdomme.) A. Oigaard.

December 15, No. 50, pp. 1625-1656

135 Atrophy of Optic Nerve in Tabes Due More to Degeneration of the Nerve Tracts than to That of the Ganglion Cells. (Skyldes Opticusatrofien ved Tabes en Lidelse af Ganglieceller eller af Nervetraade?) H. Rönne.

136 Operative Treatment of Mammary Cancer. H. Svenné. Commenced in No. 49.

December 29, No. 52, pp. 1689-1720

137 Compensating Emphysema and the Lessons to be Learned from It for Surgery of the Lungs. (Teorien om det kompenserende Lungeemfysem og dets Betydning som Arbejdsgrundlag i Lungekirurgien.) H. Møllgaard. Commenced in No. 51.

138 Diverticula in the Bladder. (Om Blæredivertikler.) A. Lendorf.

Nordiskt Medicinskt Arkiv, Stockholm

XLI, Surgery, No. 4. Last indexed Aug. 21, p. 663

139 *Cure by Resection of Kidney of Incontinence from Supernumerary Ureter in Vulva. C. D. Josephson.

140 Primary Hypernephroid Tumors in Female Genitals. (Im weiblichen Genitale primär entstandene hypernephroide Geschwülste.) E. Bovin.

141 Successful Trephining for Intracerebral Traumatic Hemorrhage. E. Lindstom.

XLII, Internal Medicine, No. 2. Last indexed Dec. 11, p. 2044

142 *Colon Bacillus Responsible for Formation of Uric Acid. (Untersuchungen über das Verhalten der Harnsäure bei Säuglingen und Typhuspatienten so wie über die Entstehung der Harnsäure.) H. Trautner. Commenced in No. 3.

143 Proximal Paralysis of the Arm of Cortical and Subcortical Origin. G. Söderbergh.

139. **Treatment of Incontinence from Supernumerary Ureter.**—Josephson was consulted in regard to a little girl with incontinence of urine explained by a supernumerary ureter opening into the vulva below the normal urethra. He advised the parents to wait until the girl had grown larger and then to have the condition remedied by an operation. This was done when the girl was 18 years old. Injection of a stain into the kidneys through the normal ureters did not stain the urine from the abnormal ureter, showing that it had a separate pelvis. A supernumerary ureter has been known to cross to the bladder from the other side, but crossing has never been observed with one opening into the vulva, so he did not fear this possible contingency. A considerable amount of fluid injected into the right kidney caused pain exclusively in this region, which he assumed to be evidence that there were two separate kidneys. The part of the kidney containing the supernumerary hilus and ureter was found divided from the main portion by a deep groove and was readily resected. In conclusion he reviews the various operations that have been done for this condition, and criticizes the technic used in some as he thinks his method would have given better results in some of the cases on record.

142. **Colon Bacillus and Uric Acid.**—Trautner has continued his research in this line, examining 88 children, 39 infants and large numbers of older children, besides 32 typhoid patients, with 327 control examinations, the latter including 50 patients with scarlet fever, 28 with tuberculosis, 130 with other diseases, 110 healthy soldiers and 9 persons with the uric acid diathesis. No uric acid was found in healthy infants, and the colon bacillus was rarely present in their stools. When large amounts of colon bacilli were found in the infants' stools, considerable amounts of uric acid appeared in the urine. Rabbits with no uric acid in the urine soon showed a considerable amount after being fed with colon bacilli. Typhoid bacilli seem to kill colon bacilli, this action being marked in the test-tube with a peptone culture medium, in the course of a few days. During typhoid, the proportion of uric acid in the urine progressively declines as the disease runs its course, so that the amount of uric acid is much less in advanced typhoid than in normal persons and in those with other maladies and in the same person before the typhoid. These facts, he says, seem to confirm his assertion that the colon bacillus is responsible for the production of uric acid.

Upsala Läkareförenings Förhandlingar, Upsala

XV, Nos. 1-2. Last indexed Dec. 11, p. 2046

144 The Internal Secretions and the Clinical Importance of Disturbances in Them. (Om den inre sekretionen och den kliniska betydelsen af des rubbningar.) K. Petren.

145 *Kidney and Bladder Surgery. (Sammanställning af fall från urinvägarnas kirurgiska sjukdomar.) G. Ekehorn.

146 *Applied Social Hygiene in Campaign Against Tuberculosis in Sweden. (Det socialhygieniska försöket i Neder-Luleå socken.) G. Neander.

145. **Surgery of the Urinary Apparatus.**—Among the 87 cases reported by Ekehorn were 18 in which nephropexy was required, 5 cases of hydronephrosis, 7 of pyonephrosis, 10 of tumors in the kidneys, and 4 in the bladder, with 28 cases of bladder stone and several of renal lithiasis. He operated on account of hematuria in 9 cases. Among the points brought out from this material is the frequency of pyonephrosis in one kidney accompanying stones in the other. He encountered this combination in 5 cases. The importance of diagnosing and curing hydronephrosis to ward off more serious complications later is also emphasized. A history of symptoms suggesting old hydronephrosis is often found in the more severe forms of kidney disease. One patient, a woman, in this cate-

gory, required nephrotomy and nephrectomy later and a series of operations on the remaining kidney in which stones kept forming. She suffered much unless a tube was retained continuously in the fistula into the kidney. The lower end of the tube was finally implanted in the bladder to serve as an artificial ureter. It answered the purpose perfectly but the patient complained of pain from it, ceasing when the tube was withdrawn from the bladder. She now wears a urinal and is content with her kidney fistula, and is otherwise in good health. This long martyrdom might have been prevented, he believes, if the old hydronephrosis had been detected and cured years before. Among the 10 cases of kidney tumors were some in which blood-stained urine had attracted attention 6 years or several months before, but had not recurred; in others there had been hematuria constantly for from 2 to 6 months. One patient had noticed the tumor 4 years before, but in this and in another case the disturbances had been ascribed to the digestive apparatus. The tumor was readily palpable in all but proved inoperable in half the patients.

146. **Practical Measures for Social Hygiene in Campaign Against Tuberculosis in Sweden.**—Neander reports more fully the workings and details of the results accomplished in the model settlement, *Hälsan*, which was described in THE JOURNAL, Dec. 7, 1907, page 1930. It is an experiment to provide accommodations for the tuberculous who are unable to secure hygienic surroundings at home, while at the same time it supplies nourishing food for others who come merely to take fresh-air treatment, attend school, etc. Every family in the province has been examined and an accompanying chart shows the distribution of the cases of tuberculosis and the measures adopted to prevent the spread of the disease and to cure or relieve the sick. Neander calls it a "social hygiene experiment," but the results realized seem to advance it beyond the rank of an experiment. It combines the home and the sanatorium, food, recreation, dispensary and school, and takes the whole province under its wing.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

A QUIZ BOOK OF NURSING FOR TEACHERS AND STUDENTS. By Amy E. Pope, Superintendent Insular School of Nursing, San Juan, Porto Rico, and Thirza A. Pope, Supervisor of Visiting Nurses of the New York A. I. C. P. With Chapters on Visiting Nursing, by Margaret A. Bewley, R.N., Instructor in Visiting and District Nursing in the Presbyterian Hospital, New York. Hospital Planning, Construction and Equipment, by Bertrand E. Taylor, A.A.I.A., and Hospital Bookkeeping and Statistics, by Frederic B. Morlok, Chief Clerk in Presbyterian Hospital, New York. Cloth. Pp. 469. Price, $1.75. New York: G. P. Putnam's Sons, 1909.

THE AFTER-TREATMENT OF OPERATIONS. A Manual for Practitioners and House Surgeons. By P. Lockhart Mummery, F.R.C.S., Senior Assistant Surgeon, St. Mark's Hospital for Fistula and other Diseases of the Rectum, and to the Queen's Hospital for Children, London. Third Edition. Cloth. Pp. 251, with 38 illustrations. Price, $2.25 net. New York: William Wood & Co., 1909.

THE STOMACH, INTESTINES AND PANCREAS. The Medico-Chirurgical Series No. 2. By W. C. Rosanquet, M.A., M.D., Assistant Physician to Charing Cross Hospital and to Brompton Hospital, and H. S. Clogg, M.S., F.R.C.S., Assistant to Surgeon Charing Cross Hospital. Cloth. Pp. 665, with 110 illustrations. Price, $4 net. New York: William Wood & Co., 1910.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS. Vol. III: Annual Meeting held at the Homestead, Hot Springs of Virginia, May 1 and 2, 1908. Pp. 188, with illustrations. Vol. IV: Annual Meeting held at Hotel Montanesca, Mount Pocono, Pennsylvania, May 31 and June 1, 1909. Pp. 306, with illustrations. Paper. New York: The Grafton Press.

PROCEEDINGS OF THE TWENTY-SEVENTH ANNUAL MEETING OF THE MARYLAND PHARMACEUTICAL ASSOCIATION, Ocean City, Maryland, June 22 to 25, 1909. Together with the Code of Ethics, Constitution and By-Laws, List of Officers and Members, etc. Paper. Pp. 160. [Secretary, E. F. Kelly, 303 W. Pratt Street, Baltimore.]

BULLETIN DE LA SOCIÉTÉ DE MÉDECINE DE ROUEN. Troisième série. Vol. 22. (Pour faire suite a *l'Union Médicale* de la Seine-Inférieure.) Publié par les soins de M. Dévé, Secretary des Seances. 47e Année, 1908. Paper. Pp. 263. Rouen: Au Siège de la Société Hôtel des Sociétés savantes, rue Saint-Lo, 1909.

DEMOGRAPHIE UND EPIDEMIOLOGIE DER STADT BASEL WÄHREND DER LETZTEN DREI JAHRHUNDERTE 1601-1900. Von Albrecht Burckhardt, Professor der Hygiene. Programm zur Rektoratsfeier der Universität Basel, 1908. Paper. Pp. 111. Basel: F. Reinhardt, Universitätsbuchdruckerei 1908.

THE HARVEIAN ORATION ON EXPERIMENTAL PSYCHOLOGY AND HYPNOTISM. Delivered before the Royal College of Physicians of London, Oct. 18, 1909. By George H. Savage, M.D., Consulting Physician and late Lecturer on Mental Diseases, Guy's Hospital. Paper. Price, 1 shilling net. Pp. 44. London: Henry Frowde, Oxford University Press, Amen Corner, E. C., 1909.

THE BIENNIAL REPORT OF THE BOARD OF MANAGERS OF THE SPRINGFIELD STATE HOSPITAL OF THE STATE OF MARYLAND, SYKESVILLE, MARYLAND, from Oct. 1, 1907, to Oct. 1, 1909, to his Excellency, the Governor of Maryland. Paper. Pp. 97, with illustrations.

INDUSTRIAL AND COMMERCIAL EDUCATION IN RELATION TO CONDITIONS IN THE CITY OF CHICAGO. Report of a Preliminary Survey by the Committee on Industrial and Commercial Education of the Chicago Association of Commerce. Paper. Pp. 64. 1909.

PROCEEDINGS OF THE AMERICAN SOCIETY FOR PSYCHICAL RESEARCH. Section "B" of the American Institute for Scientific Research. Paper. Pp. 119. Vol. III, Part 2. Price, $1. New York: American Society for Psychical Research, 1909.

A TEXT-BOOK OF MEDICAL TREATMENT (Alphabetically arranged). By William Calwell, M.A., M.D., Physician, Royal Victoria Hospital, Belfast. Cloth. Pp. 630. Price, $4.50. London: E. Arnold, 41 and 43 Maddox St., Bond St., W.; New York, Longmans, Green & Co., 1910.

DIE VERFÜGUNGSBESCHRÄNKUNGEN DES VERPFÄNDERS BESONDERS IN DEN PAPYRI, mit einem Anhang: eine Unveröffentlichte Basler Papyrusurkunde. Von Ernst Rabel. Paper. Pp. 116. Leipzig: Verlag von Veit & Comp., 1909.

JEJUNAL AND GASTROJEJUNAL ULCER FOLLOWING GASTROJEJUNOSTOMY. By Herbert J. Paterson, F.R.C.S., Assistant Surgeon to the London Temperance Hospital. Pp. 72. Cloth. London: John Bale, Sons & Danielsson, 1909.

THE DIETETIC TREATMENT OF DIABETES. By B. D. Basu, Major, I. M. S. (Retired). Cloth. Pp. 52. Second Edition. Price, 1 rupee, 8 annas. Allahabad: Panini Office, Bhuvaneswari Asram, 40 Bahadurganj, 1909.

LE GLOBULIN DES MAMMIFÈRES. Par le docteur M. Aynaud, Préparateur à la Faculté. Paper. Pp. 229, with illustrations. Paris: G. Steinheil, Éditeur, 2 Rue Casimir-Delavigne, 1910.

PUBLICATIONS OF THE UNITED STATES PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE. Paper. Pp. 25. Washington: Government Printing Office, 1910.

New Patents

Recent patents of interest to physicians:

938125. Hair-growing device. F. G. Daggett and E. G. Slinghart, Cleveland, Ohio.
938128. Neutralizing solutions of salts. B. Diamand, Idaweiche, Oberschlesieu, Germany.
927928. Preparation of camphene. O. L. A. Dubosc, Rouen, France.
938374. Production of kvass. A. Eisenberg, St. Petersburg, Russia.
938144. Sprayer. E. Harry, Buffalo, N. Y.
938247. Breathing mask. E. Kuhn, Berlin, Germany.
937825. Vibrating-tension, and operating table. J. Lend, Chicago.
938399. Electrical exercising apparatus. W. C. Schauffer, Amsterdam, N. Y.
938440. Ankle-brace. F. J. Sescila, Lorain, Ohio.
938544. Hypodermic syringe. W. Ball, Echuca, Victoria, Australia.
938951. Hypodermic syringe. F. D. Bell, Glen Ridge, N. J.
938967. Catamenial bandage. C. B. Cahoon, New York.
938968. Sanitary washable case for comfortables. A. C. Caldwell, Sacramento, Cal.
938648. Atomizer. T. A. De Vilbiss, Toledo, Ohio.
939138. Utilizing dried milk. J. A. Just, Syracuse, N. Y.
939139. Fibrous desiccated milk. J. A. Just, Syracuse, N. Y.
939034. Surgical instrument. J. W. Kolb, Fairfax, Okla.
939035. Surgical instrument. J. W. Kolb, Medicine Lodge, Kan.
938597. Syringe for hypodermic and intramuscular injections. R. Lombardo, Genoa, Italy.
938496. Ambulance. C. Mestrovich, Portland, Ore.
938778. Water purifier. J. W. Morrison, Batavia, N. Y.
938779. Purifying water. J. W. Morrison, Batavia, N. Y.
939075. Phenol halogen phthalein compound. W. R. Orndorff, Ithaca, N. Y.
939162. Pneumatic apparatus. A. A. Pindstofte, Frederiksberg, near Copenhagen, Denmark.
939097. Preparing a preventive of tuberculosis. J. F. Rosenbach, Göttingen, Germany.
939098. Antiseptic finger moistener. J. A. Sauer, Brooklyn., and G. E. Potter, Newark, N. J.
938517. Beverage siphon. H. J. Schmitt, Jersey City, N. J.
938614. Non-odorous phenol salve and ointment, N. Sulzberger, New York.
938525. Electric mouth-mirror. B. E. Turney, Bridgeport, Conn.
938808. Therapeutic device. S. T. Yount, Chicago.
939584, 939540, and 939941. Manufacturing benzoate. E. O. Barstow, Midland, Mich.
939043. Catamenial garment. A. L. Brodton, Mobile, Ala.
939822. Massage and air-compressing machine. J. B. Fey, Columbus, Ohio.
939266. Vaginal syringe. E. H. Keske, Hoboken, N. J.
939520. Syringe or the like. C. P. Leyner, Boston.
939431. Hair tonic. F. W. E. Muller, Chicago.
939742. Treatment of quebracho extract. A. Redlich and J. Wladika, Vienna, Austria-Hungary.
940576. Obstetrical device. H. J. Barnes, Gunter, Texas.
940519. Surgical applicator. E. H. Eastman, Hot Springs, Ark.
940454. Breast-pump. E. P. Fowler, New York.
940256. Chest-expansion measuring device. C. W. Kennedy, E. W. Carlson, and N. C. Jeffes, Schenectady, N. Y.
940604. Vanorizer for disinfectants. C. C. Leathers, Leytonstone, England.
940477. Spraying nozzle. A. E. Preston, Battle Creek, Mich.
940622. Truss. T. H. Stanley, Denver.
940217. Method and apparatus for determining proportions in compounds and mixtures. L. Taylor, Swarthmore, Pa.
940097. Disinfecting apparatus. P. J. Walsh, Detroit.
940104. Ambulance. J. P. L. Wilson, Cleveland, Ohio.